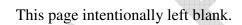# System Specification
For
Alaska Flight Service Modernization (AFSM)
Automation System

FAA-E-3008
Version 1.3
20 October 2008

Federal Aviation Administration

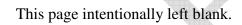800 Independence Avenue, SW

Washington, DC 20591

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Table of Contents

List of Tables

List of Figures

1 Introduction

1.1 Document Overview

This Alaska Flight Service Modernization (AFSM) Automation System Specification establishes the functional, performance, design, construction, support and verification requirements for the AFSM Automation system.

For ease of reference and reduction of repeated wording, the AFSM Automation system will be referred to as: 'the System', 'the system', 'System', or 'system' throughout the entirety of this document.

1.2 Document Organization

Section 1 – Introduction. Presents a brief overview of the AFSM specification's contents.

Section 2 - Applicable Documents. Identifies the various government and industry standards referenced in this Specification.

Section 3 - Requirements. Defines the functionality, products, system characteristics, external interfaces, operational and implementation aspects of the System.

Section 4 - Requirements Verification Correlation. Provides a matrix of all System requirements in this specification correlated with their unique Identification Numbers and the expected verification methods.

Section 5 – Delivery and Transition.

Section 6 - Acronyms & Abbreviations. Lists the acronyms used in this document and their definitions. Defines specific terms used in this specification related to the Alaska Flight Service operations and system capabilities.

1.3 System Overview

Figure 1-1 depicts the System from a high level. Flight Service Specialists and Supervisors, Flight Service System Administrators, First Level and Second Level Engineering Maintenance, and the System Operations Center are direct users of the System. The Functional, External Interfaces, Government Furnished Equipment, Government Furnished Information, and System States and Modes comprise the System definition. External Interfaces to National Airspace System (NAS) systems, Non-NAS systems, Pilot Web Access over the Internet, and Flight Service Specialist remote access to support Air shows and temporary operations provide indirect user and system interaction with the System.

Figure 1-1 AFSM Automation System

2 Applicable Documents

The following documents form a part of this specification to the extent specified herein. In the event of a conflict between the documents referenced herein and the contents of this specification, the contents of this specification are considered the superseding requirement.

2.1 FAA Documents

2.1.1 FAA Specifications

Document Number	Document Name
FAA-G-2100	Electronic Equipment, General Requirements
	FAA Asset Identification Specification Ver.2.5.2 dated June 16, 2006

2.1.2 FAA Standards

Document Number	Document Name
DOT-FAA/CT/03-05, HF STD-001	FAA Human Factors Design Standard (HFDS) for Acquisition of Commercial-Off-The-Shelf, Non Developmental, and Developmental Systems
FAA-STD-001B-76	Color and Texture of Finishes for National Airspace System (NAS) Equipment
FAA-STD-019	Lightning, Protection, Grounding, Bonding, and Shielding for Facilities
FAA-STD-020	Transient Protection Grounding, Bonding, and Shielding Requirements for Equipment
FAA-STD-026	Software Development for the National Airspace System (NAS)
FAA-STD-028	Contract Training Programs
FAA-STD-045	National Airspace System (NAS) Open Systems Interconnection Security Architecture, Protocols and Mechanisms

2.1.3 FAA Orders

Document Number	Document Name
FAA Order 1050.10	Prevention, Control and Abatement of Environmental Pollution at FAA Facilities
FAA Order 1100.157	National Systems Engineering Divisions Maintenance
FAA Order 1200.22	NAS Data and Interface Equipment Used by Outside Interests
FAA Order 1370.82	Information System Security (ISS) Program
FAA Order 1370.83	Internet Access Points
FAA Order 1370.84	Internet Services
FAA Order 1370.92	Password and PIN Management
FAA Order 1370.100	Media Sanitizing and Destruction Policy
FAA Order 1370.102	System Use Notification and Disclaimer Statement Policy
FAA Order 1375.1	Data Management
FAA Order 1600.1	Personnel Security Program
FAA Order 1600.72	Contractor and Industrial Security Program
FAA Order 1600.73	Contractor and Industrial Security Program Operating Procedures
FAA Order 3000.10	Airways Facilities Maintenance Technical Training
FAA Order 3900.19	FAA Occupational Safety and Health Program
FAA Order 4560.1	Policies and Procedures Covering the Provisioning Process During the Acquisition of FAA Material
FAA Order 4650.20	Reporting and Replacement of Items Falling Under Warranty
FAA Order 6000.30	National Airspace System Maintenance Policy
FAA Order 6950.2	Electrical Power Policy Implementation at National Airspace System Facilities
FAA Order 7110.10	Flight Services
FAA Order 7930.2	Notices to Airmen (NOTAM)

2.2 Non-FAA Documents

2.2.1 Military Standards

Document Number	Document Name
MIL-STD-1472	Human Engineering Design Criteria for Military Systems, Equipment and Facilities
MIL-HDBK-454	General Guidelines for Electronic Equipment

2.2.2 Federal Standards

Document Number	Document Name
29 CFR 1910	Occupational Safety and Health Standards (OSHA)
44 U.S.C.	44 United States Code (U.S.C.), Federal Information Security Act
47 CFR Part 15	Federal Communications Commission (FCC) Class A
FIPS 140	Federal Information Processing Standard

2.3 Non-Government Documents

2.3.1 Industry Standards

Document Number	Document Name
UL 1950	Underwriters Laboratory Standards for Safety of Information Technology Equipment, Including Electrical Business Equipment
NFPA 70	National Fire Protection Association Standard 70 National Electrical Code
NFPA 70 E	Standard for Electrical Safety in the Workplace

2.3.2 Other Documents

Document Number	Document Name
NAS MD-300 series	National Airspace System En Route Configuration Management Document Computer Program Functional Specifications
ICAO DOC-4444-RAC/501	ICAO Rules of the Air and Air Traffic Services
FHM-12	Federal Meteorological Handbook No. 12, United States Meteorological Codes and Coding Practices
ETF Document	Internet Engineering Task Force (ETF) Request for Comments (RFC) 1825-1829

Document Number	Document Name
WMO-386	Manual on the Global Telecommunication System
JO 6000.53	Remote Maintenance Monitoring (RMM) Interface Development and Implementation

3 Requirements

3.1 System Definition

The objective of the AFSM Automation System is to provide users the capability/services to obtain useful, timely and accurate weather and aeronautical information to support flight planning and inflight functions.

To support this objective the system provides the capabilities to acquire, validate, retrieve, restore, store, and display information to support weather briefing, pre-flight planning, and inflight operations. In addition, the System provides remote access for specialists and pilots, provides general support functions to provide maintenance support, and provides Help functions for the users.

In the following sections and subsections there are requirements denoted with an '*' next to the unique requirement number. These requirements are considered to be tiered requirements.

3.1.1   Functional Layouts

3.1.1.1   Weather Briefing

3.1.1.1.1   Alphanumeric (A/N) and Aeronautical Data

a)   The System must [1] simultaneously receive, validate, and store A/N weather data and aeronautical data messages.

b)   The System must [2] receive, validate, and store Meteorological Aviation Routine Weather Report (METAR) data.

c)   The System must [3] receive, validate, and store Aviation Special METAR (SPECI) data.

d)   The System must [4] receive, validate, and store Radar Weather Report (SD) data.

e)   The System must [5] receive, validate, and store routine Pilot Report (UA) data.

f)   The System must [6] receive, validate, and store Urgent Pilot Report (UUA) data.

g)   The System must [7] receive, validate, and store Notice to Airmen (NOTAM) data.

h)   The System must [8] receive, validate, and store FDC NOTAM data.

i)   The System must [9] receive, validate, and store NOTAM rejects.

j)   The System must [10] receive, validate, and store Area Forecast (FA) data.

k)   The System must [11] receive, validate, and store Winds and Temperature Aloft Forecast (FD) data.

l)   The System must [12] receive, validate, and store Terminal Aerodrome Forecast (TAF) data.

m)   The System must [13] receive, validate, and store AIRMET (WA) data.

n)   The System must [14] receive, validate, and store SIGMET (WS) data.

o)   The System must [15] receive, validate, and store Cyclone SIGMET (WC) data.

p)   The System must [16] receive, validate, and store Volcanic Ash SIGMET (WV) data.

q)   The System must [17] receive, validate, and store Convective SIGMET (WST) data.

r) The System must [18] receive, validate, and store Severe Weather Watch Bulletins (WW) data.

s) The System must [19] receive, validate, and store Convective Outlook (AC) data.

t) The System must [20] receive, validate, and store Center Weather Advisory (CWA) data.

u) The System must [21] receive, validate, and store Meteorological Impact Statement (MIS) data.

v) The System must [22] receive, validate, and store Hurricane Advisory (WH) data.

w) The System must [23] receive, validate, and store Air Traffic Control System Command Center (ATCSCC) data.

x) The System must [24] receive, validate, and store Special Use Airspace (SUA) data.

y) The System must [25] receive, validate, and store Military Training Route (MTR) data.

z) The System must [26] receive, validate, and store Military Operations Area (MOA) and Temporary Military Operations Area (TMOA) data.

aa) The System must [27] receive, validate, and store Law Enforcement (LE) aeronautical and alert data.

bb) The System must [28] receive, validate, and store Global Positioning System (GPS) Receiver Autonomous Integrity Monitoring (RAIM) data.

cc) The System must [29] receive, validate, and store Public Forecast data.

dd) The System must [30] receive, validate, and store Forecast Discussion data.

ee) The System must [31] receive, validate, and store Recreational Forecast data.

ff) The System must [32] receive, validate, and store Marine Forecast data.

gg) The System must [33] receive, validate, and store Hydrology Forecast data.

hh) The System must [34] receive, validate, and store Rivers & Lakes Forecast data.

ii) The System must [35] receive, validate, and store Sea and Ice Forecast data.

jj) The System must [36] receive, validate, and store Fire Forecast data.

kk) The System must [37] receive, validate, and store Lightning Strike data.

ll) The System must [38] receive, validate, and store Light House Wind data.

mm) The System must [39] inhibit the output of superseded weather and aeronautical data.

nn) The System must [40] inhibit the output of cancelled weather and aeronautical data.

oo) For duplicate weather and aeronautical data, the System must [41] consider the latter product as the most current and up to date.

pp) The System must [42] be user selectable to receive, validate, and store A/N weather data that results from a World Meteorological Organization (WMO) header request.

qq) The System must [43] be user selectable to receive, validate, and store A/N weather data that results from an individual product request.

rr) The System must [44] be user selectable to specify a list of products that when updated will alert the user.

3.1.1.1.2 Alphanumeric Weather Briefings

a) The System must [45] provide data for weather briefings in accordance with FAA-Order 7110.10.

b) The System must [46] receive, transmit, validate, and store A/N weather and aeronautical data.

c) The System must [47] provide Standard, Abbreviated and Outlook Weather Briefings.

d) The System must [48] * provide a Delta Weather Briefing.

e) The System must [49] provide user configurable parameters that provide filtering of a weather briefing.

f) The System must [50] carry forward into a flight plan mask all weather data related to flight plan functions.

g) The System must [51] be user selectable to print a weather briefing.

h) The System must [52] be user selectable to change weather briefing parameters after a briefing is displayed without reentry of all data.

i) The System must provide weather briefings for:

   1) Alaska[53]

   2) Canada[2846]

   3) Contiguous United States (CONUS)[2847]

   4) Hawaii[2848]

   5) Russia[2849]

   6) Mexico[2850]

   7) Europe[2851]

   8) Japan[2852]

   9) Korea[2853]

   10) China[2854]

   11) Guam[2855]

3.1.1.1.2.1 Standard Weather Briefing

a) The System must [54] provide data for Standard Weather Briefings in accordance with FAA-Order 7110.10.

b) The System must provide the following Standard Weather Briefings types:

   1) The default type is a graphical Standard Weather Briefing with supporting A/N weather briefing text.[55] *

   2) A selectable A/N text only Standard Weather Briefing.[2856]

c) Standard Weather Briefings must [56] label, segment, and output adverse weather products to the user for the affected area, region or route corridor.

d) Standard Weather Briefings must [57] label, segment, and output the latest surface observations to the user for the departure, destination and, alternate(s) affecting the area, region or route corridor.

e) Standard Weather Briefings must [58] label, segment, and output the latest enroute surface observations to the user for the affected area, region or route corridor.

f) Standard Weather Briefings must [59] label, segment, and output the latest terminal forecasts to the user for the departure, destination and, alternate(s) affecting the area, region or route corridor.

g) Standard Weather Briefings must [60] label, segment, and output pilot reports to the user for the affected area, region or route corridor.

h) Standard Weather Briefings must [61] label, segment, and output the latest forecast winds and temperature aloft reports to the user for the affected area, region or route corridor.

i) Standard Weather Briefings must [62] label, segment, and output the latest radar reports to the user for the affected area, region or route corridor.

j) Standard Weather Briefings must [63] label, segment and output NOTAMs to the user for the area, region or route corridor.

k) Standard Weather Briefings must [64] label, segment, and output the latest ATC delay and flow control advisories to the user for the affected area, region or route corridor.

l) Standard Weather Briefings must [65] label, segment, and output the latest area forecast to the user for the area, region or route corridor.

   1) The System must [66] output those portions of the area forecast that affect the user specified route.

   2) The System must [67] output those portions of the area forecast that affect the user specified area.

m) Standard Weather Briefing products must [68] be user selectable for an Area.

n) Standard Weather Briefing products must [69] be user selectable for a Region.

o) Standard Weather Briefing products must [70] be user selectable for a Route.

p) Standard Weather Briefing products must [71] be user selectable for Trend Weather.

q) The System must [72] provide the capability to request a Standard Weather Briefing from a weather briefing mask.

r) The System must [73] provide the capability to request a Standard Weather Briefing from a flight plan display.

s) The System must [74] * provide the capability to request a Standard Weather Briefing from a digital flight progress strip.

3.1.1.1.2.1.1 Standard Weather Briefing Products

a) Standard Weather Briefings must [75] label, segment, and output A/N weather products and NOTAMs to the user.

b) Standard Weather Briefings must label, segment, and output the following Adverse Conditions to include:

   1) Area Forecast[76]

   2) Severe Weather Outlook[2857]

   3) Severe Weather Warning[2858]

    4)   SIGMETs[2859]

    5)   AIRMETs[2860]

    6)   Center Weather Advisory[2861]

    7)   NOTAMs[3060]

c)   Standard Weather Briefings must label, segment, and output the following Current Conditions to include:

    1)   Synopsis[77]

    2)   Surface Observation[2862]

    3)   Trend Weather[2863]

    4)   Pilot Weather Report (PIREP)[2864]

    5)   Radar Report[2865]

    6)   NOTAMs[2866]

d)   Standard Weather Briefings must label, segment, and output the following Forecast Conditions/Outlook to include:

    1)   Area Forecast [78]

    2)   Terminal Forecast[2867]

    3)   Winds Aloft Forecast[2868]

e)   Standard Weather Briefings must label, segment, and output the following NOTAMS to include:

    1)   NOTAM D (Distant)[79]

    2)   GPS NOTAMs[2869]

    3)   LORAN NOTAMs[2870]

    4)   Military NOTAMs[2871]

    5)   ICAO NOTAMs[2872]

    6)   TFR NOTAMs[2873]

    7)   FDC NOTAMs[2874]

    8)   FDC Special NOTAMs[2875]

    9)   General FDC[2876]

    10) CARF NOTAMs[2877]

    11) USD NOTAMs[2878]

    12) UAR NOTAMs[2879]

f)   Standard Weather Briefings must [80] label, segment, and output ATCSCC information.

g)   Standard Weather Briefings must [81] label, segment, and output SUA status.

3.1.1.1.2.2   Abbreviated Weather Briefing

a)   The System must [82] provide the capability for users to provide Abbreviated Weather Briefings in accordance with FAA-Order 7110.10.

b)   The System must provide the following Abbreviated Weather Briefings types:

1) The default type is a graphical Abbreviated Weather Briefing with supported A/N weather briefing text.[83] *

2) A selectable A/N text only Abbreviated Weather Briefing.[2880]

c) Abbreviated Weather Briefings must [84] label, segment, and output requested weather products to the user for the affected area, region or route corridor.

d) Abbreviated Weather Briefing products must [85] be user selectable for an Area.

e) Abbreviated Weather Briefing products must [86] be user selectable for a Region.

f) Abbreviated Weather Briefing products must [87] be user selectable for a Route.

g) Abbreviated Weather Briefing products must [88] be user selectable for Trend Weather.

h) The System must [89] provide the capability to request an Abbreviated Weather Briefing from a weather briefing mask.

i) The System must [90] provide the capability to request an Abbreviated Weather Briefing from a flight plan display.

j) The System must [91] * provide the capability to request an Abbreviated Weather Briefing from a digital flight progress strip.

3.1.1.1.2.3   Outlook Weather Briefing

a) The System must [92] provide the capability for users to provide Outlook Weather Briefings in accordance with FAA-Order 7110.10.

b) The System must provide the following Outlook Weather Briefings types:

1) The default type is a graphical Outlook Weather Briefing with supported A/N weather briefing text.[93] *

2) A selectable A/N text only Outlook Weather Briefing.[2881]

c) Outlook Weather Briefings must [94] label, segment, and output requested weather products to the user for the affected area, region, or route corridor when the Estimated Time of Departure (ETD) is 6 or more hours from the briefing time.

d) Outlook Weather Briefings must provide the following information:

1) Adverse conditions[95]

2) Forecast conditions[2882]

e) Outlook Weather Briefing products must [96] be user selectable for an Area.

f) Outlook Weather Briefing products must [97] be user selectable for a Region.

g) Outlook Weather Briefing products must [98] be user selectable for a Route.

h) Outlook Weather Briefing products must [99] be user selectable for Trend Weather.

i) The System must [100] provide the capability to request a Outlook Weather Briefing from a weather briefing mask.

j) The System must [101] provide the capability to request a Outlook Weather Briefing from a flight plan display.

k) The System must [102] * provide the capability to request a Outlook Weather Briefing from a digital flight progress strip.

3.1.1.1.2.4   Delta Weather Briefing

a) The System must [103] * provide a Delta Weather Briefing that identifies changes in weather conditions and aeronautical information between a start time and current time.

b) The System must [104] * provide a Delta Weather Briefing that identifies changes in weather conditions and aeronautical information that differs from that previously provided for a defined Aircraft ID.

c) The System must [105] * provide a Delta Weather Briefing that identifies changes in weather conditions and aeronautical information between a start time and current time for a defined Aircraft ID.

d) The System must [106] * provide a weather briefing history for a defined Aircraft ID.

e) The System must provide the following Delta Weather Briefings types:

1) The default type is a graphical Delta Weather Briefing with supported A/N weather briefing text.[107] *

2) A selectable A/N text only Delta Weather Briefing.[2883] *

f) The Delta Weather Briefing products must [108] * be user selectable for an Area.

g) The Delta Weather Briefing products must [109] * be user selectable for a Region.

h) The Delta Weather Briefing products must [110] * be user selectable for a Route.

i) The Delta Weather Briefing products must [111] * be user selectable for Trend Weather.

j) The System must [112] * provide the capability to request a Delta Weather Briefing from a weather briefing mask.

k) The System must [113] * provide the capability to request a Delta Weather Briefing from a flight plan display.

l) The System must [114] * provide the capability to request a Delta Weather Briefing from a digital flight progress strip.

3.1.1.1.2.5   Area Briefing Format

a) The System must [115] provide the capability for users to provide an area oriented briefing through a Standard, Abbreviated or Outlook briefing mask.

b) The System must [116] orient A/N weather, aeronautical, and graphic data to a defined area.

c) The area radius must [117] be configurable per area briefing.

d) The winds aloft radius must [118] be configurable per area briefing.

e) The SPECI Time Interval user parameter must [119] be configurable per area briefing.

f) The Pilot Weather Report (PIREP) Time Interval user parameter must [120] be configurable per area briefing.

g) The System must [121] be user selectable to overlay the area briefing on any weather graphic map.

3.1.1.1.2.6   Region Briefing Format

a)   The System must [122] provide the capability for users to provide a region oriented briefing through a Standard, Abbreviated or Outlook briefing mask.

b)   The System must [123] orient A/N weather, aeronautical, and graphic data to a defined region.

c)   For Alaskan region briefings, the System must [124] orient the region briefing for one of three sub-state identifiers: AA (Anchorage), AF (Fairbanks) and AJ (Juneau).

d)   For Canadian region briefings, the System must [125] orient the region briefing for a specified province.

e)   For CONUS region briefings, the System must [126] orient the region briefing for a specified state.

f)   The SPECI Time Interval user parameter must [127] be configurable per region briefing.

g)   The PIREP Time Interval user parameter must [128] be configurable per region briefing.

h)   The System must [129] be user selectable to overlay the region briefing on any weather graphic map.

3.1.1.1.2.7   Route Briefing Format

a)   The System must [130] provide the capability for users to provide a route oriented briefing through a Standard, Abbreviated or Outlook briefing mask.

b)   The System must [131] orient A/N weather, aeronautical, and graphic data to a defined route.

c)   The route corridor width must [132] be configurable per route briefing.

d)   The winds aloft corridor width must [133] be configurable per route briefing.

e)   The System must [134] stratify forecast winds aloft by altitude within the route corridor.

f)   The SPECI Time Interval user parameter must [135] be configurable per route briefing.

g)   The PIREP Time Interval user parameter must [136] be configurable per route briefing.

h)   The System must [137] be user selectable to overlay the route briefing on any weather graphic map.

3.1.1.1.2.8   Trend Briefing Format

a)   The System must [138] provide the capability for users to provide a trend briefing through a Standard, Abbreviated or Outlook briefing mask.

b)   A trend briefing must [139] contain current surface observations.

c)   A trend briefing must [140] contain all surface observations received during the previous two hours.

d)   A trend briefing must [141] contain special surface observations as defined by a user configurable parameter.

e)   A trend briefing must [142] contain the previous hour of Pilot Reports.

f)   A trend briefing must [143] contain the current Terminal Forecast (TAF).

g)   A trend briefing must [144] display current data before older data.

h)   The System must [145] * be user selectable to overlay the trend briefing on any weather graphic map.

3.1.1.1.2.9   Selected Product Retrieval

The System provides the capability to perform a selected product retrieval to request individual briefing product(s) for a specific location(s) for display.

a)   The System must [146] provide selected product retrieval for specific locations that are entered.

b)   The System must [147] provide a selected product retrieval applicable for a specified site. (e.g. – METAR, UA, TW, TAF, NOTAM, & SYNS).

c)   The System must [148] provide a selected product retrieval for a specified site that is applicable for an area. (e.g. – WA, WH, WS, WST, WW, AC, CWA, FA, FD, SD, & FDC).

d)   The System must [149] provide ATCSCC messages for a selected product retrieval when the affected facility of the ATCSCC message matches the locations that are entered.

e)   The System must [150] provide NOTAM messages for a selected product retrieval when the affected facility of the NOTAM message matches the locations that are entered.

f)   The System must [151] provide IR reports for a selected product retrieval when route numbers are entered.

g)   The System must [152] provide VFR Route (VR) reports for a selected product retrieval when route numbers are entered.

h)   The System must [153] provide Transcribed Weather Broadcasts (TWEB) reports for a selected product retrieval when TWEB IDs are entered.

i)   The System must [154] provide MOA reports for a selected product retrieval when MOA names are entered.

j)   The System must [155] provide ICAO reports for a selected product retrieval when WMO Headers are entered.

k)   The System must [156] provide the capability to enter up to 20 locations for a selected product retrieval.

l)   The SPECI Time Interval user parameter must [157] be configurable per selected product retrieval request.

m)   The PIREP Time Interval user parameter must [158] be configurable per selected product retrieval request.

n)   The System must [159] be user selectable to overlay the selected locations and product retrieval on any weather graphic map.

3.1.1.1.2.10   Forecast Winds and Temperature Aloft

a)   The System must [160] use Forecast Winds and Temperature Aloft and Gridded Winds and Temperature Aloft to interpolate for flight level winds.

   1)   The System must [161] interpolate between forecast levels.

   2)   The System must [162] interpolate between forecast locations.

b)   The System must [163] output Forecast Winds and Temperature Aloft data for the departure point.

c)   The System must [164] output Forecast Winds and Temperature Aloft data for the destination point.

d)   The System must [165] output Forecast Winds and Temperature Aloft data at least every 200 nautical miles (nm) along the route corridor.

e)   The System must [166] display all Forecast Winds and Temperature Aloft data for the specified altitude plus and minus the range in the Winds Aloft Vertical Range system configurable parameter.

f)   The System must [167] * display Forecast Winds and Temperature Aloft data in a Graphical Weather Briefing.

3.1.1.1.3   Weather Graphics

a)   The System must receive, validate, store, and display weather graphics that provide geopolitical boundary coverage of the following:

   1)   Alaska[168]

   2)   Canada[2884]

   3)   CONUS[2885]

   4)   Hawaii[2886]

   5)   Russia[2887]

   6)   Mexico[2888]

   7)   Europe[2889]

   8)   Japan[2890]

   9)   Korea[2891]

   10)   China [2892]

   11)   Guam[2893]

b)   The System must [169] receive, validate, store, and display weather graphics concurrently with the receipt and processing of A/N weather and aeronautical message data.

c)   The System must [170] provide and interact with industry standard Commercial-off-the-Shelf (COTS) software for the user development of local graphic products.

3.1.1.1.3.1   Weather Graphic Products

a)   The System must [171] receive, validate, store, and display National Weather Service weather graphics.

b) The System must [172] receive, validate, store, and display National Oceanic and Atmospheric Administration (NOAA) weather graphics.

c) The System must [173] receive, validate, store, and display Environment Canada weather graphics.

d) The System must [174] receive, validate, store, and display Weather Depiction products.

e) The System must [175] receive, validate, store, and display Surface Analysis products.

f) The System must receive, validate, store, and display the following Composite Moisture products:

   1) Freezing Level[176]

   2) Lifted Index[2894]

   3) Precipitable Water[2895]

   4) Relative Humidity[2896]

g) The System must [177] receive, validate, store, and display Lightning Data products.

h) The System must [178] receive, validate, store, and display Constant Pressure products.

i) The System must [179] receive, validate, store, and display Observed Wind and Temperatures Aloft products.

j) The System must receive, validate, store, and display the following Satellite Imagery products:

   1) Infrared[180]

   2) Visible[2897]

   3) Water Vapor[2898]

   4) Mosaic[2899]

k) The System must receive, validate, store, and display the following Next Generation Weather Radar (NEXRAD) radar products:

   1) Individual Sites[181]

   2) Mosaics[2900]

l) The System must [182] receive, validate, store, and display Gridded products.

m) The System must receive, validate, store, and display the following 12 hour to 60 hour Forecast products:

   1) Surface Prognosis[183]

   2) Surface Temperature[2901]

   3) Significant Weather Prognosis[2902]

   4) Max/Min Temperatures[2903]

   5) Jet Stream[2904]

   6) Severe Weather Outlook[2905]

   7) Forecast Winds and Temperature Aloft (include direction and temperature)[2906]

n) The System must receive, validate, store, and display the following Trend products:

       1)   Sea Level Pressure and 1000-500 mb Thickness[184]

       2)   Sea Level Pressure and 850-300 mb Thickness[2907]

       3)   Precipitation and Vertical Velocity[2908]

       4)   Height and Vorticity Analysis[2909]

o)   The System must [185] receive, validate, store, and display Local Graphic products.

p)   The System must [186] receive, validate, store, and display Blank Map products.

q)   The System must [187] receive, validate, store, and display Forecast Model products.

r)   The System must [188] receive, validate, store, and display Area of Turbulence Forecast products.

s)   The System must [189] receive, validate, store, and display Thunderstorm Probability products.

t)   The System must [190] receive, validate, store, and display Icing Potential products.

u)   The System must [191] receive, validate, store, and display Collaborative Convective Forecast products.

v)   The System must [192] receive, validate, store, and display FAA Weather Camera Image products.

w)   The System must [193] receive, validate, store, and display FAA Weather Camera Clear Day Photo products.

x)   The System must [194] * receive, validate, store, and display Digital NOTAM products.

y)   The System must [195] receive, validate, store, and display Graphical Area Forecast products.

z)   The System must [196] receive, validate, store, and display Volcanic Ash products.

aa)   The System must [197] receive, validate, store, and display Hurricane Tracking products.

bb)   The System must [198] display weather graphics along with supporting A/N weather data.

3.1.1.1.3.1.1   NEXRAD Radar Products

a)   The System must receive, validate, store, and display Alaskan NEXRAD products for the following WSR-88D sites:

       1)   Nome[199]

       2)   Bethel[2910]

       3)   King Salmon[2911

       4)   Kenai[2912]

       5)   Middleton Island[2913]

       6)   Biorka Island[2914]

       7)   Pedro Dome[2915]

b)   The System must receive, validate, store, and display Canadian NEXRAD products for the following WSR-88D sites:

    1)   Grand Prairie[200]

    2)   Prince George[2916]

    3)   Edmonton[2917]

    4)   Calgary[2918]

    5)   Kamloops[2919]

    6)   Vancouver[2920]

    7)   Victoria[2921]

c)   The System must receive, validate, store, and display the following NEXRAD products for all CONUS WSR-88D sites:

    1)   Base Reflectivity 0.5 products[201]

    2)   Base Reflectivity 1.5 products[2922]

    3)   Composite Reflectivity products[2923]

    4)   Velocity Azimuth Display (VAD) Wind products[2924]

    5)   Echo Top products[2925]

d)   The System must [202] receive, validate, store, and display Radar Mosaics products.

e)   The System must [203] receive, validate, store, and display NEXRAD products on a per NEXRAD site basis.

f)   The System must [204] provide NEXRAD products with an average refresh rate of at minimum once every 6 minutes.

g)   The System must [205] provide the most current NEXRAD data available.

3.1.1.1.3.1.2 Satellite Imagery Products

a)   The System must receive, validate, store, and display the following Alaskan Visible Satellite Imagery products:

    1)   Bering Strait 1.6 KM[206]

    2)   Arctic Coast 1.6 KM[2926]

    3)   Alaska 4.4 KM[2927]

    4)   SE Alaska 1.1 KM [2928]

    5)   Alaska 1.65 KM[2929]

    6)   NW Alaska 1.1 KM[2930]

    7)   Bering Sea 1.65 KM[2931]

    8)   Juneau 1.1 KM[2932]

    9)   Kamchatka 1.6 KM[2933]

b)   The System must receive, validate, store, and display the following Alaskan Infrared Satellite Imagery products:

    1)   Bering Strait 1.6 KM[207]

    2)   Arctic Coast 1.6 KM[2934]

    3)   Alaska 4.4 KM[2935]

    4)   SE Alaska 1.1 KM[2936]

    5)   Alaska 1.65 KM[2937]

    6)   NW Alaska 1.1 KM[2938]

    7)   AK Mosaic[2939]

    8)   Juneau 1.1 KM[2940]

    9)   Kamchatka 1.6 KM[2941]

c)   The System must receive, validate, store, and display the following Alaskan Water Vapor Satellite Imagery products:

    1)   Bering Strait 1.6 KM[208]

    2)   Arctic Coast 1.6 KM[2942]

    3)   Alaska 4.4 KM[2943]

    4)   SE Alaska 1.1 KM[2944]

    5)   Alaska 1.65 KM[2945]

    6)   NW Alaska 1.1 KM[2946]

    7)   Bering Sea 1.65 KM[2947]

    8)   Juneau 1.1 KM[2948]

    9)   Kamchatka 1.6 KM[2949]

d)   System must [209] receive validate, store, and display Global Orbiting Environmental Satellites (GOES) and Polar Orbiting Environmental Satellite (POES) satellite imagery.

e)   The System must [210] receive, validate, store, and display CONUS GOES East and West satellite imagery.

f)   The System must [211] receive, validate, store, and display high resolution satellite imagery products.

g)   The System must [212] receive, validate, store, and display area products configurable to a location.

h)   The System must [213] receive validate, store, and display a zoomed imagery product.

3.1.1.1.3.1.3 Gridded Data Products

a)   The System must [214] display gridded products made up of labeled contours and streamlines.

    1)   The contours must [215] be smooth curved lines.

3.1.1.1.3.2   Graphical Weather Briefings

a)   The System must [216] * provide a graphical Standard Weather Briefing with supporting A/N weather briefing text.

b)   Parameters for the graphical Standard Weather Briefing and supporting A/N weather briefing text must [217] * be derived from the data fields that are contained in the active (in focus) weather briefing mask, digital flight progress strip, and flight plan display.

c) Information presented in a graphical Standard Weather Briefing must [218] * be filtered such that only A/N weather, aeronautical data and graphical products along the requested route of flight or area are displayed.

d) All graphical products that pertain to the requested route of flight or area must [219] * be thumbnailed and available for display.

e) The System must [220] * initially provide the graphical Standard Weather Briefing on a scale that shows the entire route or area.

f) The System must [221] * be user selectable to zoom in or out and pan as needed to see desired levels of detail.

g) The System must [222] * provide a graphical Standard Weather Briefing display that contains category tabs for changing overlay displays.

h) The graphical Standard Weather Briefing category tabs must be defined as:
   1) Adverse Conditions[223] *
   2) Current Conditions[2950] *
   3) Forecast Conditions[2951] *
   4) NOTAMS[2952] *
   5) ATC Delays[2953] *
   6) Other[2954] *

i) The System must [224] * be user selectable to display specific Standard Weather Briefing conditions under each category tab.

j) The System must [225] * display radar imagery, satellite imagery, and Alaskan weather camera imagery under the Current Conditions tab.

k) The System must [226] * use unique shapes, icons, and colors to depict the various briefing conditions overlaid on a graphical Standard Weather Briefing.

l) The System must [227] * be user selectable to filter the data of a graphical Standard Weather Briefing in order to provide a graphical Outlook Weather Briefing.

m) The System must [228] * be user selectable to filter the data of a graphical Standard Weather Briefing in order to provide a graphical Abbreviated Weather Briefing.

n) The System must [229] * be user selectable to filter the data of a graphical Standard Weather Briefing in order to provide a graphical Delta Weather Briefing.

o) The System must [230] * automatically update the A/N text data overlays and graphics as new data is received.

p) The System must [231] * be user selectable to display FAA weather camera images along the route of a graphical weather briefing.

3.1.1.1.3.3   Static Overlays

a) The System must [232] provide static overlays in the same projection as the weather product or base map.

b) The System must [233] be user selectable to toggle on and off all static overlays.

c) The System must [234] provide Latitude/Longitude overlays.

d) The System must [235] provide Land/Sea overlays.

e)   The System must [236] provide river and lake overlays.

f)   The System must [237] provide Air Route Traffic Control Center (ARTCC) boundary overlays.

g)   The System must [238] provide ARTCC High Sector boundary overlays.

h)   The System must [239] provide ARTCC Low Sector boundary overlays.

i)   The System must [240] provide ARTCC Super High Sector boundary overlays.

j)   The System must [241] provide Alaskan Area Forecast Subsection boundary overlays.

k)   The System must [242] provide Counties overlays.

l)   The System must [243] provide Geopolitical overlays.

m)   The System must [244] provide Airports overlays.

n)   The System must [245] provide Navigational Aids overlays.

o)   The System must [246] provide Weather Radar Site overlays.

p)   The System must [247] provide Upper Air Sounding station overlays.

q)   The System must [248] provide Synoptic station overlays.

r)   The System must [249] provide Routes and Airways overlays.

s)   The System must [250] provide Military Training Route overlays.

t)   The System must [251] provide Military Operations Area and Temporary Military Operations Area overlays.

u)   The System must [252] provide Oceanic Route overlays.

v)   The System must [253] provide Special Use Airspace overlays.

w)   The System must [254] provide Holding Pattern Airspace overlays.

x)   The System must [255] provide Interstate Highways overlays.

y)   The System must [256] provide US Route overlays.

z)   The System must [257] provide Railroad overlays.

aa)   The System must [258] provide a distance measuring tool between two or more points.

bb)   The System must [259] provide Alaska State Highway overlays.

cc)   The System must [260] provide Alaska Pipe Line and Pump Station overlays.

dd)   The System must [261] provide Local Knowledge overlays.

ee)   The System must [262] provide Mountain Pass overlays.

ff)   The System must [263] provide Airport Photo overlays.

3.1.1.1.3.4   Dynamic Overlays

a)   The System must [264] provide dynamic overlays of A/N weather reports and advisories on base maps and weather graphics.

b)   The System must [265] provide Pilot Report/Urgent Pilot Report dynamic overlays.

c)   The System must [266] provide Severe Weather Forecast Alert dynamic overlays.

d)   The System must [267] provide SIGMET dynamic overlays.

e)   The System must [268] provide Convective SIGMET dynamic overlays.

f)   The System must [269] provide Volcanic Ash SIGMET dynamic overlays.

g)   The System must [270] provide AIRMET dynamic overlays.

h)   The System must [271] provide Temporary Flight Restrictions (TFR) dynamic overlays.

i)   The System must [272] provide Center Weather Advisory (CWA) dynamic overlays.

j)   The System must [273] provide METAR/SPECI dynamic overlays.

k)   The System must [274] provide FAA Weather Camera dynamic overlays.

l)   The System must [275] provide Area Forecast dynamic overlays.

m)   The System must [276] * provide NOTAM dynamic overlays.

n)   The System must [277] provide TAF dynamic overlays.

o)   The System must [278] provide SUA dynamic overlays.

p)   The System must [279] provide WW dynamic overlays.

q)   The System must [280] provide WH dynamic overlays.

r)   The System must [281] provide GPS/RAIM prediction tool dynamic overlays.

3.1.1.1.3.5   Popup Displays

a)   The System must [282] provide popup displays on any earth locatable graphic map.

b)   The System must be selectable to display the following from the context menu of any earth locatable graphic product:

  1)   Sectional Charts[283]

  2)   Weather Cameras[2955]

  3)   IFR En Route High and Low Altitude charts[2956]

  4)   Terminal Procedures[2957]

  5)   Airport Diagrams[2958]

  6)   Sunrise, Sunset, and Civil Twilight information[2959]

  7)   Airport photos[2960]

3.1.1.1.3.6   Animation

a)   The System must [284] animate a minimum of 8 hours of satellite imagery.

b)   The System must [285] animate a minimum of 3 hours of radar imagery.

c)   The System must [286] animate a minimum of 3 hours of FAA weather camera imagery.

d)   The System must [287] automatically update an animation loop when a new product is received.

e)   The System must [288] be user selectable to adjust the animation speed in frames per second.

f)   The System must [289] be user selectable to adjust the pause time between animation loops.

g)   The System must [290] be user selectable to manually step through the animation loop.

h)   The System must [291] be user selectable to continuously run an animation loop.

i)   The System must [292] be user selectable to remove images from the animation loop.

3.1.1.1.3.7   Product Sequencing

a)   The System must [293] be user selectable to store a graphical product sequence.

b)   The System must [294] be user selectable to edit a graphical product sequence.

c)   The System must [295] be user selectable to delete a graphical product sequence.

d)   The System must [296] be user selectable to display a sequence of products that has been stored.

e)   The System must [297] be user selectable to automatically sequence through a display of selected products.

f)   The System must [298] be user selectable to select the time between displays.

g)   The System must [299] be user selectable to manually step through product sequence.

3.1.1.1.3.8   Zoom, Scroll, Pan and Drag

a)   The System must [300] be user selectable to zoom and scroll through a weather graphic map.

b)   The System must [301] be user selectable to pan and drag a weather graphic map.

c)   The System must [302] provide a minimum of 16 zoom magnification steps.

d)   The System must [303] be user selectable to zoom, scroll, pan and drag using the drag and scroll functions of the pointing device.

3.1.1.1.3.9   FAA Weather Cameras

a)   The System must [304] be user selectable to overlay FAA weather camera geographic location icons on any earth locatable graphic map.

   1)   The FAA weather camera icons must [305] provide a link to the associated weather camera images.

b)   The System must [306] be user selectable to display an FAA weather camera image from the context menu of any earth locatable graphic map.

c)   The System must [307] display all FAA weather camera images for a site using a single click of a pointing device.

d)   The System must [308] be user selectable to overlay FAA weather camera images along a route of flight.

e)   The System must [309] display all FAA weather camera thumbnails for the specified area, location, or route.

f)   The System must [310] be user selectable to display FAA weather camera locations.

g)   The System must [311] provide clear day photos for FAA weather camera locations.

h)   The System must [312] be user selectable to indicate the FAA weather camera directional orientations.

i)   The System must [313] identify FAA weather cameras that are out of service.

3.1.1.1.4 Graphic Earth Satellite Imagery

a)   The System must [314] display earth-locatable graphic earth satellite imagery with resolution adjustable down to 1,000 feet apparent altitude.

b) The System must [315] provide the capability to overlay static and dynamic overlays on an earth-locatable graphic earth satellite image.

3.1.1.1.5 NOTAMs

a) The System must [316] receive, validate, store, and display FDC NOTAMS.

    1) The System must [317] receive, validate, store, and display TFR NOTAMS.

b) The System must [318] receive, validate, store, and display Distant NOTAMS.

c) The System must [319] receive, validate, store, and display Military NOTAMS.

d) The System must [320] receive, validate, store, and display ICAO NOTAMS.

e) The System must [321] receive, validate, store, and display GPS NOTAMS.

f) The System must [322] receive, validate, store, and display LORAN NOTAMS.

g) The System must [323] receive, validate, store, and display CARF NOTAMS.

h) The System must [324] receive, validate, store, and display USD NOTAMS.

i) The System must [325] receive, validate, store, and display UAR NOTAMS.

j) The System must [326] receive, validate, store, and display FDC Special NOTAMS.

k) The System must [327] receive, validate, store, and display General FDC NOTAMS.

l) The System must [328] retrieve NOTAM data for the affected facility as requested by the user.

m) The System must [329] automatically update the NOTAM database upon receipt of a NOTAM Cancellation Message.

n) The System must [330] automatically ensure the integrity of the NOTAM database on an hourly basis at a minimum.

o) The System must [331] recognize an affected facility location and store them for briefings.

p) The System must [332] receive, validate, and process FDC NOTAM cancellations.

q) The System must [333] automatically delete self-canceling NOTAMs that contain WEF/TIL date-time group text in the body of the NOTAM.

r) The System must [334] only display current NOTAMS in weather briefings.

s) The System must [335] * receive, validate, store, and display digital NOTAMs.

t) The System must [336] be user selectable for a NOTAM collapse presentation.

    1) The NOTAM collapse presentation must include:

        a. ADP Code[337]

        b. Accountable Facility[2961]

        c. NOTAM Number[2962]

        d. Affected Facility[2963]

        e. The first two lines of the NOTAM text[2964]

    2) The NOTAM collapse presentation must [338] be expandable to show the entire NOTAM with a single click of a pointing device.

    3) The expanded NOTAM must [339] be collapsible with a single click of a pointing device.

u) The System must [340] assemble multipart NOTAMs that have been broken apart during transmission.

v) The System must parse NOTAMs by the following twelve (12) keywords:

   1) RWY[341]
   2) TWY[2965]
   3) RAMP[2966]
   4) APRON[2967]
   5) AD[2968]
   6) NAV[2969]
   7) COM[2970]
   8) SVC[2971]
   9) AIRSPACE[2972]
   10) OBST[2973]
   11) U[2974]
   12) O[2975]

w) The System must [342] color code NOTAMs based on a keyword or content search string.

x) The System must [343] be user selectable to change the search string default.

3.1.1.2 Flight Plan Processing

The System provides the users the capabilities to originate and transmit a Flight Plan and associated messages to appropriate facilities, to receive and process Flight Plans and associated messages from appropriate facilities, to display Flight Plan data, and to process the Proposed, Suspense, and Inbound Lists.

The System provides the capability to transmit flight plan messages to ARTCC Host Computers Systems (HCSs), Automated Flight Service Station (AFSSs), Flight Service Stations (FSSs), Base Operations (BASOPSs), International facilities and other NAS and non-NAS systems. The System provides the capability to automatically process acknowledgment messages from these facilities.

The System provides the capability for a user to enter, validate, file, activate, amend, close, and cancel Flight Plans.

The Flight Plans processed by the System include Domestic and Canadian Instrument Flight Rules (IFR) and Visual Flight Rules (VFR), International Civil Aviation Organization (ICAO) IFR, ICAO VFR, ICAO IFR/VFR, ICAO VFR/IFR, Military IFR, Military VFR, Military IFR Stopovers, Military VFR Stopovers, Stereo Military, and Defense Visual Flight Rules (DVFR). The System allows a flight plan to be filed with either a domestic flight plan mask, ICAO flight plan mask, or handwriting input device. The user may use either mask to file a domestic or international flight plan regardless of the location of the departure or destination addresses.

3.1.1.2.1 Flight Planning Functions

a) The System must [344] provide the capability for users to perform flight planning functions IAW FAA Order 7110.10.

b) The System must [345] provide the capability for users to perform flight planning functions IAW NAS MD 300 series.

c) The System must [346] provide the capability for users to perform flight planning functions IAW ICAO Rules of the Air and Air Traffic Services document 4444.

1) In the event of a conflict between the ICAO Rules of the Air and Air Traffic Services document 4444 and FAA Order 7110.10, the contents of the FAA Order 7110.10 must [347] be considered the superseding document.

d) The System must [348] provide the capability to validate, file and activate a flight plan in one user action.

3.1.1.2.2 Auto Addressing

a) The System must [349] automatically address flight plans for transmission to appropriate facilities, inserting address(es) into the appropriate field(s) if the address data is known.

b) The System must [350] provide the capability for the user to manually override the automatically inserted address(es).

c) The System must [351] provide the capability for the user to manually add additional addresses.

d) The System must [352] expand known abbreviated addresses into their expanded form.

e) If an error is encountered when attempting to expand an abbreviated address, the System must [353] notify the user of the error.

3.1.1.2.3 Manual Override of Flight Plan Fields

a) The System must [354] provide the capability for the user to override any flight plan field that is automatically filled by the System.

b) The System must [355] provide the capability for the user to override any flight plan field for which an error is reported by the System.

3.1.1.2.4 Flight Plan Field Validation

The System automatically performs syntax error checking of the data entered by a user. When a user enters invalid data, the System displays an error message and the criteria for acceptable data as depicted in Table 3 - 1.

Table 3-1 Flight Plan Field Entries

Field Name	Valid Entries
Aircraft ID	2 to 7 A/N chars (1st char is alpha)
Flight Rules	VFR, DVFR, IFR, Military IFR, Military VFR, Stereo Military, Military IFR Stopover, Military VFR Stopover, IFR/VFR and VFR/IFR
Type of Flight (ICAO)	G=General Aviation (GA) , M=Military, S=Scheduled, N=Nonscheduled, X=Other that any of the defined categories

Field Name	Valid Entries
Equipment List (ICAO)	Up to 8 alphanumeric characters as follows in accordance with ICAO document 4444, Appendix 2 item 10: Radio com, navigation and approach equipment: N (if no COM/NAV) or S (if standard COM/NAV) and/or one or more letters A-Z Followed by a slash character ("/"), followed by: Surveillance equipment: N, A, C, X, P, I or S ADS equipment: D
Number of Aircraft	1 or 2 digits
Aircraft Type (ICAO)	2-4 A/N characters
Aircraft Type/ Equipment List (Domestic)	Optional Prefix: H = Heavy Aircraft, followed by a slash character ("/"), followed by 2-9 A/N characters, including an optional equipment designator preceded by a "/".
Aircraft Color	0 to 24 displayable ASCII chars (ICAO), 0 to 15 displayable ASCII chars (Domestic)
Pilot Data	0 to 201 displayable ASCII chars
Output Routing	3, 4, or 8 alphabetic chars
Closure Points	1 to 16 groups of 3, 4, or 8 alphabetic chars separated by space chars
AFPT Capable	On or Off
Wake Turbulence	H, M, or L
Departure	2 to 12 A/N (Domestic), 4 A/N (ICAO)
ETD	4 or 6 digits representing date/time group
True Airspeed	Domestic: 2 to 4 numeric chars or an "M" followed by 3 numerics or "SC" ICAO: "M" followed by 3 numeric chars, if mach speed or "N" followed by 4 numeric chars representing knots/hr or "K" followed by 4 numeric chars representing kilometers/hr
Enroute Altitude	2 to 7 A/N (optionally includes "/" char) (Domestic) 3 to 5 A/N (ICAO) (All Flight Plans: Minimum altitude is 100 feet)
Destination	2 to 12 A/N (Domestic), 4 A/N (ICAO)
Route	0 to 558 displayable ASCII chars

Field Name	Valid Entries
Time Enroute	4 digits, 0 or 4 digits (Domestic VFR)
ETA	4 or 6 digits representing date/time group
Alternate Airport	3 to 4 A/N (Domestic), 4 A/N (ICAO)
Second Alternate Airport	4 A/N (ICAO Only)
Fuel On Board	4 digits
Number On Board	1-10 characters + '/'
Emergency Radio	4 A/N – N, U, V, E
Survival Equipment	None or combination of the following: polar, desert, maritime, jungle
Survival Life Jackets	Combination of the following: lights, fluorescent lights, UHF radio with jacket, VHF radio with jacket or None
Number of Dinghies	1 to 2 digits
Dinghy Capacity	0 to 3 digits
Dinghy Cover	Yes or No
Dinghy Color	0 to 24 alpha and space chars
Remarks On Equipment	0 to 80 displayable ASCII chars
Remarks	Domestic: 0 to 325 displayable ASCII chars ICAO: 1 to 325 displayable ASCII chars

a) The System must [356] display all errors identified during validation when a user makes an invalid entry.

b) The System must [357] insert a "0" (zero) in the Remarks field if the remarks field in an ICAO flight plan is empty upon validation of the flight plan.

c) The System must [358] insert "DCT" in the Route field if the Route field in an ICAO flight plan is empty upon validation of the flight plan.

d) The System must [359] automatically insert the corresponding field header into the Remarks field if the Aircraft Type, Departure, Destination, Alternate Airport or Second Alternate Airport fields of an ICAO flight plan contain "ZZZZ".

3.1.1.2.4.1   Route Elements

The System allows the user to define a flight plan route by using various route elements or combinations of route elements. If no route element is specified, the System will default to a direct route.

Table 3-2 Route Element Formats

Element	Type	Format	Description
Delay Time	appended data	/D(h)h+mm	where: (h)h is hours 0-21 mm is minutes 00-59. (Delay times may be appended to any fix in the route except the last.)
ETE	appended data	/hhmm	Estimated Time Enroute: hh is hours 00-99 mm is minutes 00-59. (ETE is appended to the last fix in the route field of an IFR flight plan message prior to transmission to the ARTCC. ETE may not be appended to a route entered with a flight plan function.)
FRD	fix	nn(n)(n)(n)dddmmm	Fix Radial Distance: nn(n)(n)(n) is a LOCID ddd is degrees measured from north 001-360 mmm is distance in nautical miles 001-999.
Jet	airway	Jd(d)(d)(X)	Jet airway: d(d)(d) is one to three numeric digits 1-999 (X) is E, W, N, or S.

Element	Type	Format	Description
Domestic Latitude/ Longitude	fix	ddmm(x)/(d)ddmm(y)	Latitude ddmm(x): dd is degrees 00-90 mm is minutes 00-59 x is "N" or "S" Longitude (d)ddmm(y): (d)dd is degrees 00-180 mm is minutes 00-59 y is "E" or "W". If directional letters are used, they will appear on both latitude and longitude. If they are not used, default values will be N and W. If degrees latitude is 90, the minutes latitude will be 00. If degrees longitude is 180, the minutes longitude will be 00.
ICAO Latitude Longitude	fix	dd(mm)x(d)dd(mm)y	Latitude dd(mm)x: dd is degrees 00-90 mm is minutes 00-59 x is "N" or "S" Longitude (d)dd(mm)y: (d)dd is degrees 00-180 mm is minutes 00-59 y is "E" or "W".
LOCID	fix	nn(n)(n)(n)	Includes NAVAIDS, airports and weather reporting stations. Two to five alphanumeric character name for a unique location on the earth. LOCIDs used as a route element may have an ETE or Delay Time appended. Name will be unique with respect to set of fixes.
Published Radial	airway	aaaddd	where: aaa is a LOCID ddd is degrees measured from north 001-360.

Element	Type	Format	Description
RNAV Low Altitude Route (above FL180)	Airway	Qn(n)(n)	where: n(n)(n) is a route number in the range 1-499
RNAV Low Altitude Route (below FL180)	Airway	Tannn	where: nnn is a route number in the range 200-400
SID SoCal Route	airway	nn(n)(n)(n)d	Standard Instrument Departure or SoCal route: two to five alphanumeric characters followed by a numeric character. Name will be unique with respect to set of airways.
Special Designator	airway	IFR, VFR, DVFR, DCT, or XXX	These elements are verified only and not considered in further processing.
SUA	fix	nn(n)(n)(n)(n)	Special Use Area: Name of prohibited area, restricted area, warning area, military operations area, alert area, or parachute jump aircraft operations area. Name will be unique with respect to set of airways.
SUR	airway	nn(n)(n)(n)(n)	Special Use Route: Name of Military training route (IR and VR), Control and Military SR route, or other airway; e.g., North American (NA), Air Refueling (AR), Bahamian (BR), Area Navigation (RNAV), Colored Canadian High Level and Canadian Victor airways/routes. Airways in this category have no defined corridor.
STAR	airway	nn(n)(n)(n)d	Standard Terminal Arrival Route: two to five alphanumeric characters followed by a numeric character. Name will be unique with respect to set of airways.
Victor	airway	Vd(d)(d)(X)	Victor airway: d(d)(d) is one to three numeric digits 1-999 (X) is E, W, N, or S.

Element	Type	Format	Description
Change of Speed, Altitude	appended data	/SPEED ALT	where: SPEED has the format of the TS field as described in Table 3 - 1 and ALT has the format of the AE field as described in Table 3 - 1.
Colored	airway	(U)Xd(d)(d)	Colored airway: U denotes upper altitude. Colored airway 'X' is A, B, G, or R d(d)(d) is one to three numeric digits 1-999.
Bahamas	airway	BRd(d)(n)	Bahamian airway: d(d) is one to three numeric digits 1-99.
San Juan	airway	RTEd(d)	San Juan route: d(d) is one to two numeric digits 1-99.
Area High	airway	add(n)(n)	Area High route: dd is two numeric digits and (n)(n) is two optional alphanumerics.
Air Refueling	airway	ARd(d)(d)	Air Refueling route: d(d)(d) is one to three numeric digits 1-999.
Special	airway	(U)Wd	Special route: U is optional. d is one numeric digit.

Where:

a – alphabetic character

c – displayable character

d – numeric character

h – numeric character

m – numeric character

n – alphanumeric character

x – alphabetic character

y – alphabetic character

    a)   The System must [367] provide the capability for the user to enter flight plan routes using Location Identifiers (LOCIDs).

b) The System must [368] provide the capability for the user to enter flight plan routes using Fix Radial Distances.

c) The System must [369] provide the capability for the user to enter flight plan routes using Latitudes and Longitudes.

d) The System must [370] provide the capability for the user to enter flight plan routes using Navigation aids.

e) The System must [371] provide the capability for the user to enter flight plan routes using AIS, DAFIF, and other FAA-approved published data sources.

f) The System must [372] provide the capability for the user to enter flight plan routes using Area Navigation Routes.

g) The System must [373] provide the capability for the user to enter flight plan routes using Oceanic Routes.

h) The System must [374] provide the capability for the user to enter flight plan routes using Tower En Route Control (TEC) Routes.

i) The System must [375] provide the capability for the user to enter flight plan routes using Standard Instrument Departures.

j) The System must [376] provide the capability for the user to enter flight plan routes using Standard Terminal Arrival Routes.

k) The System must [377] provide the capability for the user to enter flight plan routes using Stereo Routes.

l) The System must [378] provide the capability for the user to enter direct flight plan routes.

m) The System must [379] provide the capability for the user to enter a weather reporting location as a valid route element in a VFR flight plan.

n) The System must [380] provide the capability for the user to enter "IFR" as a valid route element to designate a segment change in an ICAO composite flight plan.

o) The System must [381] provide the capability for the user to enter "VFR" as a valid route element to designate a segment change in an ICAO composite flight plan.

p) The System must [382] provide the capability for the user to enter off-airway airports as elements in the route of flight.

q) The System must [383] allow published radials as elements in the route of flight.

r) The System must [384] provide the capability for the user to indicate step increases (changes of cruise speed and cruise level) in the flight plan route.

s) The System must [385] assume a direct route if no route is entered.

3.1.1.2.4.1.1   Validation of Route Elements

a) The System must [386] validate the flight plan route.

b) The System must [387] validate the departure, destination, and route fields during route validation.

c) The System must [388] validate flight plan route information using data in the static database 56-day update.

d) The System must [389] provide users with a route override capability for route data not in the static database.

e) The System must [390] provide the user the opportunity to file a flight plan without route validation using the route override capability.

f) The System must [391] validate flight plan routes using Standard Instrument Departures as the route element immediately following the departure.

g) The System must [392] validate flight plan routes using Standard Terminal Arrival Routes as the route element immediately preceding the destination.

h) The System must [393] validate that the legs of a route in an IFR flight plan are contiguous.

i) The System must [394] process IR (IFR Route), VR (VFR Route), SR (Slow Route), AR (Air Refueling Route) and NA (North American Route) routes.

    1) The System must [395] provide the capability for the user to enter IR, VR, SR, AR and NA as route elements in Domestic Flight Plans.

    2) The System must [396] exclude from validation, Fix Radial Distances as entry or exit points along the route if they appear before or after the IR, VR, SR, AR or NA route elements.

    3) The System must [397] validate the IR, VR, SR, AR, and NA route identifiers using information in the static database.

    4) The System must [398] exclude the IR, VR, SR, AR and NA routes to build the Route Corridor for weather briefings.

    5) The System must [399] assume a direct route from the prior route element to the route element following the IR, VR, SR, AR or NA route.

j) The System must [400] provide the capability for the user to enter "ZZZZ" as a valid departure.

    1) The System must [401] validate that the following element is a fix when "ZZZZ" is used as the departure.

    2) The System must [402] assume a direct route from the route element following the "ZZZZ" when building a Route Corridor for weather briefings if "ZZZZ" is used as the departure.

k) The System must [403] provide the capability for the user to enter "ZZZZ" as a valid destination.

    1) The System must [404] validate that the preceding element is a fix when "ZZZZ" is used as the destination.

    2) The System must [405] assume a direct route from the route element preceding the "ZZZZ" when building a Route Corridor for weather briefings if "ZZZZ" is used as the destination.

l) The System must [406] provide the capability for the user to enter "XXX" as a valid route element for Domestic IFR Flight Plans.

    1) The System must [407] assume a direct route from the prior route element to the route element following the "XXX" route element when building a Route Corridor for weather briefings.

    2)   The System must [408] validate that the route element preceding "XXX" is a fix.

    3)   The System must [409] validate that the route element following "XXX" is a fix.

m)   The System must [410] provide the capability for the user to enter Area Navigation ("RNAV") as a valid route element in ICAO Flight Plans.

n)   The System must [411] provide the capability for the user to enter "DCT" in the route field in ICAO Flight Plans with the same departure and destination.

o)   The System must [412] automatically fill the Departure field with the first route element from the Route field when the Departure field is left blank.

    1)   The System must [413] prohibit the automatic filling of the Departure field for Stereo flight plans.

p)   The System must [414] automatically fill the Destination field with the last route element from the Route field when the Destination field is left blank.

    1)   The System must [415] prohibit the automatic filling of the Destination field for Stereo flight plans.

q)   The System must [416] use only spaces (" ") and dots (".") as delimiters between route elements.

r)   The System must [417] notify the user when the route validation process determines an invalid entry in the Departure field of a flight plan upon route validation.

s)   The System must [418] notify the user when the route validation process determines an invalid entry in the Destination field of a flight plan upon route validation.

t)   The System must [419] notify the user when the route validation process determines invalid entries in the route field of a flight plan upon route validation.

3.1.1.2.4.1.2   Route Override

The route override capability allows the departure, destination or route field validation to be overridden by the user. Upon validation of a flight plan, the user will receive notification of invalid values in the departure, destination and/or route fields. The user may then invoke Route Override or enter the appropriate information into the fields and file the flight plan. If the user has selected Route Override, the System may still attempt to automatically address the flight plan.

a)   The System must [420] provide the capability for the user to override the information in the route field upon validation of the flight plan.

b)   The System must [421] provide the capability for the user to correct the invalid data detected in the route field.

c)   The System must [422] provide the capability for the user to override the information in the departure field upon validation of the flight plan.

d)   The System must [423] provide the capability for the user to correct the invalid data detected in the departure field.

e)   The System must [424] provide the capability for the user to override the information in the destination field upon validation of the flight plan.

f)   The System must [425] provide the capability for the user to correct the invalid data detected in the destination field.

g) The System must [426] provide the capability to file a flight plan after the Route Override is selected.

h) The System must [427] provide the capability to provide Weather Briefings when Route Override is selected.

    1) The System must [428] assume a direct route from a valid route element to the next valid route element when building a Route Corridor for Weather Briefings.

3.1.1.2.5 Process Domestic Flight Plans

The System provides a Domestic Flight Plan Mask to permit user input of domestic flight plan data. The fields within this mask contain the fields found on FAA order 7110.10, form 7233-1. The same mask is utilized to record flight plan data for VFR, IFR, Military, Stereo, and DVFR flights.

a) The Domestic Flight Plan Mask must [429] contain a Flight Rules field.

b) The Domestic Flight Plan Mask must [430] contain an Aircraft ID field.

c) The Domestic Flight Plan Mask must [431] contain an Aircraft Type field.

d) The Domestic Flight Plan Mask must [432] contain an Airspeed field.

e) The Domestic Flight Plan Mask must [433] contain a Departure field.

f) The Domestic Flight Plan Mask must [434] contain an Estimated Time of Departure (ETD) field.

g) The Domestic Flight Plan Mask must [435] contain an En Route Altitude field.

h) The Domestic Flight Plan Mask must [436] contain a Route field.

i) The Domestic Flight Plan Mask must [437] contain a Destination field.

j) The Domestic Flight Plan Mask must [438] contain a Time En Route field.

k) The Domestic Flight Plan Mask must [439] contain a Remarks field.

l) The Domestic Flight Plan Mask must [440] contain a Fuel Capacity field.

m) The Domestic Flight Plan Mask must [441] contain an Alternate Airport field.

n) The Domestic Flight Plan Mask must [442] contain a Number on Board field.

o) The Domestic Flight Plan Mask must [443] contain an Aircraft Color field.

p) The Domestic Flight Plan Mask must [444] contain an Output Routing field.

q) The Domestic Flight Plan Mask must [445] contain a Closure Points field.

r) The Domestic Flight Plan Mask must [446] contain an Estimated Time of Arrival (ETA) field.

s) The Domestic Flight Plan Mask must [447] contain a Pilot Data field.

3.1.1.2.5.1 Domestic Flight Plan Validation

The System automatically performs syntax error checking of the data entered by a user in a Domestic Flight Plan. When a user enters invalid data, the System displays an error message and the criteria for acceptable data as depicted in Table 3 - 1.

a) The System must [448] automatically perform syntax error checking on the Domestic Flight Plan entries as specified in Table 3 - 1.

b)   The System must [449] display an error message upon validation when the user makes an invalid Domestic Flight Plan entry.

c)   The displayed error message must [450] identify the criteria for acceptable data for a Domestic Flight Plan.

d)   The System must [451] provide the capability to correct an invalid entry in a Domestic Flight Plan prior to accepting the action being performed.

3.1.1.2.5.2   Domestic Flight Plan Filing

The System allows for filing both In-Area and Out-of-Area Domestic Flight Plans.

a)   The System must [452] provide the capability to file Domestic Flight Plans up to 31 days in advance.

3.1.1.2.5.2.1   In-Area Domestic Flight Plan Filing

A flight plan is considered In-Area when the departure is inside the facility's flight plan area.

3.1.1.2.5.2.1.1 In-Area Domestic VFR Flight Plan Filing

An In-Area Domestic VFR Flight Plan applies to an aircraft operating under visual flight rules using a Domestic Flight Plan.

a)   Upon filing of an In-Area Domestic VFR Flight Plan, the System must [453] add a flight plan entry to the Proposed List.

3.1.1.2.5.2.1.2 In-Area Domestic IFR Flight Plan Filing

An In-Area Domestic IFR flight plan applies to an aircraft operating under instrument flight rules using a Domestic Flight Plan.

a)   The System must [454] add a flight plan entry to the Proposed List upon filing of an In-Area Domestic IFR Flight Plan.

b)   The System must [455] transmit an IFR Flight Plan message for the In-Area Domestic IFR Flight Plan to the ARTCC responsible for the departure or other address specified by the user at the ETD minus the IFR Transmit time (ITT) system parameter.

c)   The System must [456] add a flight plan entry awaiting acknowledgement to the Suspense List following the IFR Flight Plan message transmission for the In-Area Domestic IFR Flight Plan.

d)   The System must [457] remove the flight plan entry from the Proposed List following the IFR Flight Plan message transmission if no notification addresses are contained in the Closure Points field.

e)   The System must [458] keep the flight plan entry on the Proposed List following the IFR Flight Plan message transmission if notification addresses are contained in the Closure Points field.

3.1.1.2.5.2.2   Out-of-Area Domestic Flight Plan Filing

A flight plan is considered Out-of-Area when the departure is outside the facility's flight plan area.

3.1.1.2.5.2.2.1 Out-of-Area Domestic VFR Flight Plan Filing

An Out-of-Area Domestic VFR Flight Plan applies to an aircraft operating under visual flight rules using a Domestic Flight Plan.

a) The System must [459] add a flight plan entry to the Proposed List upon filing of an Out-of-Area Domestic VFR Flight Plan.

b) The System must [460] transmit a Proposed VFR Flight Plan message for the Out-of-Area Domestic VFR Flight Plan to the facility responsible for the departure or other address specified by the user at the ETD minus the Flight Service Station Transmit (FSST) time system parameter.

c) The System must [461] add a flight plan entry awaiting acknowledgement to the Suspense List following the Proposed VFR Flight Plan message transmission for the Out-of-Area Domestic VFR Flight Plan.

d) The System must [462] remove the flight plan entry from the Proposed List following the Proposed VFR Flight Plan message transmission for the Out-of-Area Domestic VFR Flight Plan.

3.1.1.2.5.2.2.2 Out-of-Area Domestic IFR Flight Plan Filing

An Out-of-Area Domestic IFR Flight Plan applies to an aircraft operating under instrument flight rules using a Domestic Flight Plan.

a) The System must [463] add a flight plan entry to the Proposed List upon filing of an Out-of-Area Domestic IFR Flight Plan.

b) The System must [464] transmit an IFR Flight Plan message for the Out-of-Area Domestic IFR Flight Plan to the ARTCC responsible for the departure or other address specified by the user at the ETD minus the ITT time system parameter.

c) The System must [465] transmit a Proposed IFR Flight Plan message for the Out-of-Area Domestic IFR Flight Plan to the facility responsible for the departure or other address specified by the user at the ETD minus the FSST time system parameter when one or more notification addresses are contained in the Closure Points field.

d) The System must [466] add a corresponding flight plan entry awaiting acknowledgement to the Suspense List following any message transmissions for an Out-of-Area Domestic IFR Flight Plan.

e) The System must [467] remove the flight plan entry from the Proposed List following all required message transmissions.

3.1.1.2.5.3   Domestic Flight Plan Activation

The System provides the capability to activate In-Area Domestic Flight Plans.

3.1.1.2.5.3.1   Domestic VFR Flight Plan Activation

The System provides the capability for the user to activate In-Area Domestic VFR Flight Plans. Upon activation, the System transmits a Civil Domestic Flight Notification message to the notification addresses.

a)   The System must [468] transmit a Civil Domestic Flight Notification message to the notification address(es) contained in the Closure Points field upon activation of an In-Area Domestic VFR Flight Plan.

b)   The System must [469] add a flight plan entry to the Suspense List awaiting acknowledgement following the Civil Domestic Flight Notification message transmission for the In-Area Domestic VFR Flight Plan.

c)   The System must [470] remove the flight plan entry from the Proposed List following the Civil Domestic Flight Notification message transmission for the In-Area Domestic VFR Flight Plan.

3.1.1.2.5.3.2   Domestic IFR Flight Plan Activation

The System provides the capability for the user to activate In-Area Domestic IFR Flight Plans. Upon activation, the System transmits a Civil Domestic Flight Notification message to the notification addresses.

a)   The System must [471] transmit a Civil Domestic Flight Notification message to the notification address(es) upon activation of an In-Area Domestic IFR Flight Plan when one or more notification addresses are contained in the Closure Points field.

b)   The System must [472] add a flight plan entry awaiting acknowledgement to the Suspense List following the Civil Domestic Flight Notification message transmission for the In-Area Domestic IFR Flight Plan.

c)   The System must [473] remove the flight plan entry from the Proposed List following the Civil Domestic Flight Notification message transmission for the In-Area Domestic IFR Flight Plan.

3.1.1.2.5.4   Domestic Flight Plan Amendment

a)   The System must [474] provide the capability for a user to amend a Domestic Flight Plan on the Proposed List.

b)   The System must [475] provide the capability for a user to amend a Domestic Flight Plan on the Suspense List.

c)   The System must [476] provide the capability for a user to amend a Domestic Flight Plan on the Inbound List.

3.1.1.2.5.5   Domestic Flight Plan Closure

The System provides the capability for a user to close a Domestic Flight Plan that is currently on the Inbound List.

a)   The System must [477] provide the capability for a user to close a Domestic Flight Plan on the Inbound List.

1) The System must [478] remove the Domestic Flight Plan entry from the Inbound List upon closure of the Domestic Flight Plan.

b) The System must [479] add the flight plan to the Inactive Flight Plan List upon closure of the Domestic Flight Plan.

3.1.1.2.5.6   Domestic Flight Plan Cancellation

The System provides the capability for a user to cancel a Domestic Flight Plan that is currently on the Proposed, Suspense, or Inbound List.

a) The System must [480] provide the capability for a user to cancel a Domestic Flight Plan on the Proposed List.

1) The System must [481] remove the flight plan entry from the Proposed List upon cancellation of the Domestic Flight Plan.

b) The System must [482] provide the capability for a user to cancel a Domestic Flight Plan on the Suspense List.

1) The System must [483] remove the flight plan from the Suspense List upon cancellation of the Domestic Flight Plan.

c) The System must [484] provide the capability for a user to cancel a Domestic Flight Plan on the Inbound List.

1) The System must [485] remove the flight plan from the Inbound List upon cancellation of the Domestic Flight Plan.

d) The System must [486] add the flight plan to the Inactive Flight Plan List upon cancellation of the Domestic Flight Plan.

3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans

The System provides an ICAO Flight Plan Mask to permit user input of international flight plan data. The fields within this mask contain the fields found on FAA Order 7110.10, Appendix ICAO Flight Plans.

a) The ICAO Flight Plan Mask must [487] contain a Flight Rules field.

b) The ICAO Flight Plan Mask must [488] contain an Aircraft ID field.

c) The ICAO Flight Plan Mask must [489] contain an Aircraft Type field.

d) The ICAO Flight Plan Mask must [490] contain an Airspeed field.

e) The ICAO Flight Plan Mask must [491] contain a Departure field.

f) The ICAO Flight Plan Mask must [492] contain an En Route Altitude field.

g) The ICAO Flight Plan Mask must [493] contain an ETD field.

h) The ICAO Flight Plan Mask must [494] contain a Route field.

i) The ICAO Flight Plan Mask must [495] contain a Destination field.

j) The ICAO Flight Plan Mask must [496] contain a Time En Route field.

k) The ICAO Flight Plan Mask must [497] contain a Remarks field.

l) The ICAO Flight Plan Mask must [498] contain a Fuel Capacity field.

m) The ICAO Flight Plan Mask must [499] contain an Alternate Airport field.

n)   The ICAO Flight Plan Mask must [500] contain a 2nd Alternate Airport field.

o)   The ICAO Flight Plan Mask must [501] contain a Number on Board field.

p)   The ICAO Flight Plan Mask must [502] contain an Aircraft Color field.

q)   The ICAO Flight Plan Mask must [503] contain a Type of Flight field.

r)   The ICAO Flight Plan Mask must [504] contain an Output Routing field.

s)   The ICAO Flight Plan Mask must [505] contain a Closure Points field.

t)   The ICAO Flight Plan Mask must [506] contain a Wake Turbulence field.

u)   The ICAO Flight Plan Mask must [507] contain a Number of Aircraft field.

v)   The ICAO Flight Plan Mask must [508] contain an Equipment List field.

w)   The ICAO Flight Plan Mask must [509] contain an Equipment List Remarks field.

x)   The ICAO Flight Plan Mask must [510] contain a Survival Equipment List field.

y)   The ICAO Flight Plan Mask must [511] contain an Emergency Radio field.

z)   The ICAO Flight Plan Mask must [512] contain a Life Jackets field.

aa) The ICAO Flight Plan Mask must [513] contain a Number of Dinghies field.

bb) The ICAO Flight Plan Mask must [514] contain a Dinghy Capacity field.

cc) The ICAO Flight Plan Mask must [515] contain a Dinghy Cover field.

dd) The ICAO Flight Plan Mask must [516] contain a Dinghy Color field.

ee) The ICAO Flight Plan Mask must [517] contain a Pilot Data field.

3.1.1.2.6.1   ICAO Flight Plan Validation

The System automatically performs syntax error checking of the data entered by a user in an ICAO Flight Plan. When a user enters invalid data, the System displays an error message and the criteria for acceptable data as depicted in Table 3 - 1.

a)   The System must [518] automatically perform syntax error checking on the user ICAO Flight Plan entries as specified in Table 3 - 1.

b)   The System must [519] display an error message upon validation when the user makes an invalid ICAO Flight Plan entry.

c)   The displayed error message must [520] identify the criteria for acceptable data for an ICAO Flight Plan entry.

d)   The System must [521] give the user the opportunity to correct the invalid entry in an ICAO Flight Plan prior to accepting the action being performed.

3.1.1.2.6.2   ICAO Flight Plan Filing

The System allows for filing both In-Area and Out-of-Area ICAO Flight Plans.

a)   The System must [522] provide the capability to file ICAO Flight Plans up to 31 days in advance.

3.1.1.2.6.2.1   In-Area ICAO Flight Plan Filing

A flight plan is considered In-Area when the departure is inside the facility's flight plan area.

3.1.1.2.6.2.1.1 In-Area ICAO VFR Flight Plan Filing

An In-Area ICAO VFR Flight Plan applies to an aircraft operating under visual flight rules using an International Flight Plan.

a) The System must [523] add a flight plan entry to the Proposed List upon filing of an In-Area ICAO VFR Flight Plan.

b) The System must [524] transmit an ICAO Flight Plan message for the In-Area ICAO VFR Flight Plan to the notification address(es) contained in the Closure Points field at the ETD minus the FSST time system parameter.

c) The System must [525] add a flight plan entry to the Suspense List awaiting acknowledgement following the ICAO Flight Plan message transmission for the In-Area ICAO VFR Flight Plan.

3.1.1.2.6.2.1.2 In-Area ICAO IFR Flight Plan Filing

An In-Area ICAO IFR Flight Plan applies to an aircraft operating under instrument flight rules using an International Flight Plan.

a) The System must [526] add a flight plan entry to the Proposed List upon filing of an In-Area ICAO IFR Flight Plan.

b) The System must [527] transmit an ICAO Flight Plan message for the In-Area ICAO IFR Flight Plan to the ARTCC responsible for the departure or other address specified by the user at the ETD minus the ITT time system parameter.

c) The System must [528] transmit an ICAO Flight Plan message for the In-Area ICAO IFR Flight Plan to the notification address(es) at the ETD minus the FSST time system parameter when one or more notification addresses are contained in the Closure Points field.

d) The System must [529] add a corresponding flight plan entry awaiting acknowledgement to the Suspense List following any ICAO Flight Plan message transmissions for an In-Area ICAO IFR Flight Plan.

e) The System must [530] remove the flight plan entry from the Proposed List if no notification addresses are contained in the Closure Points field following the ICAO Flight Plan message transmission(s) for the In-Area ICAO IFR Flight Plan.

f) The System must [531] keep the flight plan entry on the Proposed List, if notification addresses are contained in the Closure Points field, following the ICAO Flight Plan message transmission(s) for the In-Area ICAO IFR Flight Plan.

3.1.1.2.6.2.2 Out-of-Area ICAO Flight Plan Filing

A flight plan is considered Out-of-Area when the departure is outside the facility's flight plan area.

3.1.1.2.6.2.2.1 Out-of-Area ICAO VFR Flight Plan Filing

An Out-of-Area ICAO VFR Flight Plan applies to an aircraft operating under visual flight rules using an International Flight Plan where the departure is outside the facility's flight plan area.

a) The System must [532] add a flight plan entry to the Proposed List upon filing of an Out-of-Area ICAO VFR Flight Plan.

b)   The System must [533] transmit an ICAO Flight Plan message for the Out-of-Area ICAO VFR Flight Plan to the facility responsible for the departure or other address specified by the user at the ETD minus the FSST time system parameter.

c)   The System must [534] transmit an ICAO Flight Plan message for the Out-of-Area ICAO VFR Flight Plan to the notification address(es) at the ETD minus the FSST time system parameter when one or more notification addresses are contained in the Closure Points field.

d)   The System must [535] add a corresponding flight plan entry awaiting acknowledgement to the Suspense List following any message transmission for an Out-of-Area ICAO VFR Flight Plan.

e)   The System must [536] remove the flight plan entry from the Proposed List following all required message transmission(s) for the Out-of-Area ICAO VFR Flight Plan.

3.1.1.2.6.2.2.2 Out-of-Area ICAO IFR Flight Plan Filing

An Out-of-Area ICAO IFR Flight Plan applies to an aircraft operating under instrument flight rules using an International Flight Plan where the departure is outside the facility's flight plan area.

a)   The System must [537] add a flight plan entry to the Proposed List upon filing of an Out-of-Area ICAO IFR Flight Plan.

b)   The System must [538] transmit an ICAO Flight Plan message for the Out-of-Area ICAO IFR Flight Plan to the ARTCC responsible for the departure or other address specified by the user at the ETD minus the ITT time system parameter.

c)   The System must [539] transmit an ICAO Flight Plan message for the Out-of-Area ICAO IFR Flight Plan to the facility responsible for the departure at the ETD minus the FSST time system parameter when one or more notification addresses are contained in the Closure Points field.

d)   The System must [540] transmit an ICAO Flight Plan message for the Out-of-Area ICAO IFR Flight Plan to the notification address(es) at the ETD minus the FSST time system parameter when one or more notification addresses are contained in the Closure Points field.

e)   The System must [541] add a corresponding flight plan entry awaiting acknowledgement to the Suspense List following any message transmission for an Out-of-Area ICAO IFR Flight Plan.

f)   The System must [542] remove the flight plan entry from the Proposed List following all required message transmission(s) for the Out-of-Area ICAO IFR Flight Plan.

3.1.1.2.6.3   ICAO Flight Plan Activation

The System provides the capability to activate In-Area ICAO Flight Plans.

3.1.1.2.6.3.1   ICAO VFR Flight Plan Activation

The System provides the capability for the user to activate an In-Area ICAO VFR Flight Plan. Upon activation, the System transmits an ICAO Departure message to the notification addresses.

a) The System must [543] transmit an ICAO Departure message to the notification address(es) contained in the Closure Points field upon activation of an In-Area ICAO VFR Flight Plan.

b) The System must [544] add a flight plan entry to the Suspense List awaiting acknowledgement following the ICAO Departure message transmission for the In-Area ICAO VFR Flight Plan.

c) The System must [545] remove the flight plan entry from the Proposed List following the ICAO departure message transmission for the In-Area ICAO VFR Flight Plan.

3.1.1.2.6.3.2   ICAO IFR Flight Plan Activation

The System provides the capability for the user to activate an In-Area ICAO IFR Flight Plan. Upon activation, the System transmits an ICAO Departure message to the notification addresses.

a) The System must [546] transmit an ICAO Departure message for the In-Area ICAO IFR Flight Plan to the notification address(es) upon activation of the flight plan when one or more notification addresses are contained in the Closure Points field.

b) The System must [547] add a flight plan entry awaiting acknowledgement to the Suspense List following the ICAO Departure message transmission for the In-Area ICAO IFR Flight Plan.

c) The System must [548] remove the flight plan entry from the Proposed List following the ICAO Departure message transmission for the In-Area ICAO IFR Flight Plan.

3.1.1.2.6.4   ICAO Flight Plan Amendment

a) The System must [549] provide the capability for a user to amend an ICAO Flight Plan on the Proposed List.

b) The System must [550] provide the capability for a user to amend an ICAO Flight Plan on the Suspense List.

c) The System must [551] provide the capability for a user to amend an ICAO Flight Plan on the Inbound List.

3.1.1.2.6.5   ICAO Flight Plan Closure

The System provides the capability for a user to close an ICAO Flight Plan that is currently on the Inbound List.

a) The System must [552] provide the capability for a user to close an ICAO Flight Plan on the Inbound List.

   1) The System must [553] remove the ICAO Flight Plan entry from the Inbound List upon closure of the flight plan.

b) The System must [554] add the ICAO Flight Plan to the Inactive Flight Plan List upon closure of the flight plan.

3.1.1.2.6.6   ICAO Flight Plan Cancellation

The System provides the capability for a user to cancel an ICAO Flight Plan that is currently on the Proposed, Suspense, or Inbound List.

a) The System must [555] provide the capability for a user to cancel an ICAO Flight Plan on the Proposed List.

   1) The System must [556] remove the ICAO Flight Plan entry from the Proposed List upon cancellation of the flight plan.

b) The System must [557] provide the capability for a user to cancel an ICAO Flight Plan on the Suspense List.

   1) The System must [558] remove the flight plan from the Suspense List upon cancellation of the ICAO Flight Plan.

c) The System must [559] provide the capability for a user to cancel an ICAO Flight Plan on the Inbound List.

   1) The System must [560] remove the ICAO Flight Plan entry from the Inbound List upon cancellation of the flight plan.

d) The System must [561] add the ICAO Flight Plan to the Inactive Flight Plan List upon cancellation of the flight plan.

3.1.1.2.6.7   ICAO Composite Flight Plan Processing

ICAO Composite Flight Plans are International flight plans which specify VFR operations for one portion of a flight and IFR for another. The capability to switch between VFR and IFR operations is limited to one switch during the route of flight.

a) The System must [562] provide the capability to process ICAO Composite Flight Plans.

b) The System ICAO Composite Flight Plan capability must [563] provide the capability to switch between ICAO VFR and IFR flight rules once during a route of flight.

c) The System must [564] process each portion of an ICAO Composite Flight Plan IAW the flight rules applicable to the flight plan portion.

3.1.1.2.7 Process Military Flight Plans

A Military Flight Plan applies to a military aircraft operating under visual flight rules or instrument flight rules using a Domestic Flight Plan.

3.1.1.2.7.1   Military Flight Plan Validation

The System automatically performs syntax error checking of the data entered by a user in a Military Flight Plan. When a user enters invalid data, the System displays an error message and the criteria for acceptable data as depicted in Table 3 - 1.

a) The System must [565] automatically perform syntax error checking on the user Military Flight Plan entries as specified in Table 3 - 1.

b) The System must [566] display an error message upon validation when the user makes an incorrect Military Flight Plan entry.

c) The displayed error message must [567] identify the criteria for acceptable data for a Military Flight Plan.

d) The System must [568] give the user the opportunity to correct the entry in a Military Flight Plan prior to accepting the action being performed.

3.1.1.2.7.2   Military Flight Plan Filing

The System allows for filing both In-Area and Out-of-Area Military Flight Plans.

a)   The System must [569] provide the capability to file Military Flight Plans up to 31 days in advance.

3.1.1.2.7.2.1   In-Area Military Flight Plan Filing

A flight plan is considered In-Area when the departure is inside the facility's flight plan area.

3.1.1.2.7.2.1.1 In-Area Military VFR Flight Plan Filing

An In-Area Military VFR Flight Plan applies to an aircraft operating under visual flight rules using a Military Flight Plan.

a)   Upon filing of an In-Area Military VFR Flight Plan, the System must [570] add a flight plan entry to the Proposed List.

3.1.1.2.7.2.1.2 In-Area Military IFR Flight Plan Filing

An In-Area Military IFR flight plan applies to an aircraft operating under instrument flight rules using a Military Flight Plan.

a)   The System must [571] add a flight plan entry to the Proposed List upon filing of an In-Area Military IFR Flight Plan.

b)   The System must [572] transmit an IFR Flight Plan message for the In-Area Military IFR Flight Plan to the ARTCC responsible for the departure or other address specified by the user at the ETD minus the ITT time system parameter.

c)   The System must [573] add a flight plan entry awaiting acknowledgement to the Suspense List following the IFR Flight Plan message transmission for the In-Area Military IFR Flight Plan.

d)   The System must [574] keep the flight plan entry on the Proposed List awaiting activation following the IFR Flight Plan message transmission for the In-Area Military IFR Flight Plan.

3.1.1.2.7.2.2   Out-of-Area Military Flight Plan Filing

A flight plan is considered Out-of-Area when the departure is outside the facility's flight plan area.

3.1.1.2.7.2.2.1 Out-of-Area Military VFR Flight Plan Filing

An Out-of-Area Military VFR Flight Plan applies to an aircraft operating under visual flight rules using a Military Flight Plan.

a)   The System must [575] add a flight plan entry to the Proposed List upon filing of an Out-of Area Military VFR Flight Plan.

b)   The System must [576] transmit a Proposed VFR Flight Plan message for the Out-of-Area Military VFR Flight Plan to the facility responsible for the departure or other address specified by the user at the ETD minus the FSST time system parameter.

c)   The System must [577] add a flight plan entry awaiting acknowledgement to the Suspense List following the Proposed VFR Flight Plan message transmission for the Out-of-Area Military VFR Flight Plan.

d)   The System must [578] remove the flight plan entry from the Proposed List following the Proposed VFR Flight Plan message transmission for the Out-of-Area Military VFR Flight Plan.

3.1.1.2.7.2.2.2 Out-of-Area Military IFR Flight Plan Filing

An Out-of-Area Military IFR flight plan applies to an aircraft operating under instrument flight rules using a Military Flight Plan.

a)   The System must [579] add a flight plan entry to the Proposed List upon filing of an Out-of-Area Military IFR Flight Plan.

b)   The System must [580] transmit an IFR Flight Plan message for the Out-of-Area Military IFR Flight Plan to the ARTCC responsible for the departure or other address specified by the user at the ETD minus the ITT time system parameter.

c)   The System must [581] transmit a Proposed IFR Flight Plan message for the Out-of-Area Military IFR Flight Plan to the facility responsible for the departure or other address specified by the user at the ETD minus the FSST time system parameter.

d)   The System must [582] add a corresponding flight plan entry awaiting acknowledgement to the Suspense List following any message transmissions for the Out-of-Area Military IFR Flight Plan.

e)   The System must [583] remove the flight plan entry from the Proposed List following all required message transmissions for the Out-of-Area Military IFR Flight Plan.

3.1.1.2.7.2.3   Military Stopover Flight Plan Filing

A Military Stopover Flight Plan applies to an aircraft landing at multiple airports along the route using a Domestic Flight Plan. Processing of a Military Stopover Flight Plan is handled on an individual leg basis where each leg is treated as an individual flight plan message.

3.1.1.2.7.2.3.1 VFR Military Stopover Flight Plan Filing

a)   The System must [584] adhere to the filing requirements specified in the In-Area Military VFR Flight Plan Filing paragraph for a leg of a Military VFR Stopover Flight Plan departing from inside the facility's flight plan area.

b)   The System must [585] adhere to the filing requirements specified in the Out-Of-Area Military VFR Flight Plan Filing section for a leg of a Military VFR Stopover Flight Plan departing from outside the facility's flight plan area.

3.1.1.2.7.2.3.2 IFR Military Stopover Flight Plan Filing

a)   The System must [586] adhere to the filing requirements specified in the In-Area Military IFR Flight Plan Filing paragraph for a leg of a Military IFR Stopover Flight Plan departing from inside the facility's flight plan area.

b)   The System must [587] adhere to the filing requirements specified in the Out-Of-Area Military IFR Flight Plan Filing section for a leg of a Military IFR Stopover Flight Plan departing from outside the facility's flight plan area.

3.1.1.2.7.3   Military Flight Plan Activation

The System provides the capability to activate In-Area Military Flight Plans.

3.1.1.2.7.3.1   Military VFR Flight Plan Activation

The System provides the capability for the user to activate an In-Area Military VFR Flight Plan. Upon activation, the System transmits a Military Flight Notification message to the notification addresses.

a)   The System must [588] transmit a Military Flight Notification message to the notification address(es) contained in the Closure Points field upon activation of the In-Area Military VFR Flight Plan.

b)   The System must [589] add a flight plan entry to the Suspense List awaiting acknowledgement following the Military Flight Notification message transmission for the In-Area Military VFR Flight Plan.

c)   The System must [590] remove the flight plan entry from the Proposed List following the Military Flight Notification message transmission for the In-Area Military VFR Flight Plan.

3.1.1.2.7.3.2   Military IFR Flight Plan Activation

The System provides the capability for the user to activate an In-Area Military IFR Flight Plan. Upon activation, the System transmits a Military Flight Notification message to the notification addresses.

a)   The System must [591] transmit a Military Flight Notification message to the address(es) contained in the Closure Points field upon activation of the In-Area Military IFR Flight Plan.

b)   The System must [592] add a flight plan entry awaiting acknowledgement to the Suspense List following the Military Flight Notification message transmission for the In-Area Military IFR Flight Plan.

c)   The System must [593] remove the flight plan entry from the Proposed List following the Military Flight Notification message transmission for the In-Area Military IFR Flight Plan.

3.1.1.2.7.3.3   Military Stopover Flight Plan Activation

A Military Stopover Flight Plan applies to an aircraft landing at multiple airports along the route using a Domestic Flight Plan. Processing of a Military Stopover Flight Plan is handled on an individual leg basis where each leg is treated as an individual flight plan message.

3.1.1.2.7.3.3.1 Military VFR Stopover Flight Plan Activation

a)   The System must [594] adhere to the filing requirements specified in the In-Area Military VFR Flight Plan Activation paragraph for a leg of a Military VFR Stopover Flight Plan departing from inside the facility's flight plan area.

b)   The System must [595] adhere to the filing requirements specified in the Out-Of-Area Military VFR Flight Plan Activation section for a leg of a Military VFR Stopover Flight Plan departing from outside the facility's flight plan area.

3.1.1.2.7.3.3.2 Military IFR Stopover Flight Plan Activation

a) The System must [596] adhere to the filing requirements specified in the In-Area Military IFR Flight Plan Activation paragraph for a leg of a Military IFR Stopover Flight Plan departing from inside the facility's flight plan area.

b) The System must [597] adhere to the filing requirements specified in the Out-Of-Area Military IFR Flight Plan Activation section for a leg of a Military IFR Stopover Flight Plan departing from outside the facility's flight plan area.

3.1.1.2.7.4   Military Flight Plan Amendment

a) The System must [598] provide the capability for a user to amend a Military Flight Plan on the Proposed List.

b) The System must [599] provide the capability for a user to amend a Military Flight Plan on the Suspense List.

c) The System must [600] provide the capability for a user to amend a Military Flight Plan on the Inbound List.

3.1.1.2.7.5   Military Flight Plan Closure

The System provides the capability for a user to close a Military Flight Plan that is currently on the Inbound List.

a) The System must [601] provide the capability for a user to close a Military Flight Plan on the Inbound List.

1) The System must [602] remove the Military Flight Plan entry from the Inbound List upon closure of the Military Flight Plan.

b) The System must [603] add the flight plan to the Inactive Flight Plan List upon closure of the Military Flight Plan.

3.1.1.2.7.6   Military Flight Plan Cancellation

The System provides the capability for a user to cancel a Military Flight Plan that is currently on the Proposed, Suspense, or Inbound List.

a) The System must [604] provide the capability for a user to cancel a Military Flight Plan on the Proposed List.

1) The System must [605] remove the flight plan entry from the Proposed List upon cancellation of the Military Flight Plan.

b) The System must [606] provide the capability for a user to cancel a Military Flight Plan on the Suspense List.

1) The System must [607] remove the flight plan from the Suspense List upon cancellation of the Military Flight Plan.

c) The System must [608] provide the capability for a user to cancel a Military Flight Plan on the Inbound List.

1) The System must [609] remove the flight plan from the Inbound List upon cancellation of the Military Flight Plan.

d) The System must [610] add the flight plan to the Inactive Flight Plan List upon cancellation of the Military Flight Plan.

3.1.1.2.8 Process Stereo Flight Plans

A Stereo Flight Plan applies to an aircraft operating under instrument flight rules and flying an assigned route of flight using a Domestic Flight Plan.

3.1.1.2.8.1 Stereo Flight Plan Validation

The System automatically performs syntax error checking of the data entered by a user in a Stereo Flight Plan. When a user enters invalid data, the System displays an error message and the criteria for acceptable data as depicted in Table 3 - 1.

a) The System must [611] automatically perform syntax error checking on the user Stereo Flight Plan entries as specified in Table 3 - 1.

b) The System must [612] display an error message upon validation when the user makes an invalid Stereo Flight Plan entry.

c) The displayed error message must [613] identify the criteria for acceptable data for a Stereo Flight Plan.

d) The System must [614] give the user the opportunity to correct the entry in a Stereo Flight Plan prior to accepting the action being performed.

3.1.1.2.8.2 Stereo Flight Plan Filing

a) The System must [615] provide the capability to file Stereo Flight Plans up to 31 days in advance.

b) The System must [616] add a flight plan entry to the Proposed List upon filing of a Stereo Flight Plan.

c) The System must [617] transmit a Stereo Flight Plan message for the Stereo Flight Plan to the ARTCC responsible for the departure or other address specified by the user at the ETD minus the ITT time system parameter.

d) The System must [618] add a flight plan entry awaiting acknowledgement to the Suspense List following the Stereo Flight Plan message transmission for the Stereo Flight Plan.

e) The System must [619] remove the flight plan entry from the Proposed List following the Stereo Flight Plan message transmission for the Stereo Flight Plan.

3.1.1.2.8.3 Stereo Flight Plan Amendment

a) The System must [620] provide the capability for a user to amend a Stereo Flight Plan on the Proposed List.

b) The System must [621] provide the capability for a user to amend a Stereo Flight Plan on the Suspense List.

c) The System must [622] provide the capability for a user to amend a Stereo Flight Plan on the Inbound List.

3.1.1.2.8.4   Stereo Flight Plan Cancellation

The System provides the capability for a user to cancel a Stereo Flight Plan that is currently on the Proposed or Suspense List.

    a)   The System must [623] provide the capability for a user to cancel a Stereo Flight Plan on the Proposed List.

        1)   The System must [624] remove the flight plan entry from the Proposed List upon cancellation of the Stereo Flight Plan.

    b)   The System must [625] provide the capability for a user to cancel a Stereo Flight Plan on the Suspense List.

        1)   The System must [626] remove the flight plan from the Suspense List upon cancellation of the Stereo Flight Plan.

    c)   The System must [627] add the flight plan to the Inactive Flight Plan List upon cancellation of the Stereo Flight Plan.

3.1.1.2.9   Process DVFR Flight Plans

A DVFR Flight Plan applies to an aircraft operating under defense visual flight rules using a Domestic Flight Plan. The System uses the Domestic Flight Plan Mask to input DVFR Flight Plan data. The System allows the user to manually assign beacon codes to DVFR flight plans as the first element in the Remarks field.

3.1.1.2.9.1   DVFR Flight Plan Validation

The System automatically performs syntax error checking of the data entered by a user in a DVFR Flight Plan. When a user enters invalid data, the System displays an error message and the criteria for acceptable data as depicted in Table 3 - 1.

    a)   The System must [628] automatically perform syntax error checking on the user DVFR Flight Plan entries as specified in Table 3 - 1.

    b)   The System must [629] display an error message upon validation when the user makes an invalid DVFR Flight Plan entry.

    c)   The displayed error message must [630] identify the criteria for acceptable data for a DVFR Flight Plan.

    d)   The System must [631] give the user the opportunity to correct the entry in a DVFR Flight Plan prior to accepting the action being performed.

3.1.1.2.9.2   DVFR Flight Plan Filing

    a)   The System must [632] provide the capability to file DVFR Flight Plans up to 31 days in advance.

    b)   The System must [633] add a flight plan entry to the Proposed List upon filing of a DVFR Flight Plan.

    c)   The System must [634] display the associated beacon code of a DVFR flight plan on the Proposed List.

3.1.1.2.9.3 DVFR Flight Plan Activation

The System provides the capability for the user to activate a DVFR Flight Plan. Upon activation of a DVFR Flight Plan, the System transmits a DVFR Flight Plan message to the address for NORAD and a Civil Domestic Flight Notification message to the notification addresses.

a) The System must [635] transmit a DVFR Flight Plan message to the address for North American Aerospace Defense Command (NORAD) upon activation of a DVFR Flight Plan.

b) The System must [636] add a flight plan entry to the Suspense List not awaiting acknowledgement following the DVFR Flight Plan message transmission for the DVFR Flight Plan.

c) The System must [637] transmit a Civil Domestic Flight Notification message to the address(es) contained in the Closure Points field upon activation of a DVFR Flight Plan.

d) The System must [638] add a flight plan entry to the Suspense List awaiting acknowledgement following the Civil Domestic Flight Notification message transmission for the DVFR Flight Plan.

e) The System must [639] remove the flight plan entry from the Proposed List following the DVFR Flight Plan and Civil Domestic Flight Notification transmission for the DVFR Flight Plan.

3.1.1.2.9.4 DVFR Flight Plan Amendment

a) The System must [640] provide the capability for a user to amend a DVFR Flight Plan on the Proposed List.

b) The System must [641] provide the capability for a user to amend a DVFR Flight Plan on the Suspense List.

c) The System must [642] provide the capability for a user to amend a DVFR Flight Plan on the Inbound List.

3.1.1.2.9.5 DVFR Flight Plan Closure

The System provides the capability for a user to close a DVFR Flight Plan that is currently on the Inbound List.

a) The System must [643] provide the capability for a user to close a DVFR Plan on the Inbound List.

1) The System must [644] remove the flight plan entry from the Inbound List upon closure of the DVFR Flight Plan.

b) The System must [645] add the flight plan to the Inactive Flight Plan List upon closure of the DVFR Flight Plan.

3.1.1.2.9.6 DVFR Flight Plan Cancellation

The System provides the capability for a user to cancel a DVFR Flight Plan that is currently on the Proposed, Suspense, or Inbound List.

a) The System must [646] provide the capability for a user to cancel a DVFR Flight Plan on the Proposed List.

    1) The System must [647] remove the flight plan entry from the Proposed List upon cancellation of the DVFR Flight Plan.

b) The System must [648]provide the capability for a user to cancel a DVFR Flight Plan on the Suspense List.

    1) The System must [649] remove the flight plan from the Suspense List upon cancellation of the DVFR Flight Plan.

c) The System must [650] provide the capability for a user to cancel a DVFR Flight Plan on the Inbound List.

    1) The System must [651] remove the flight plan entry from the Inbound List upon cancellation of the DVFR Flight Plan.

d) The System must [652] add the flight plan to the Inactive Flight Plan List upon cancellation of the DVFR Flight Plan.

3.1.1.2.10 Preferential Routes

a) The System must [653] maintain FAA IFR preferential route data.

b) The System must [654] maintain FAA IFR low-altitude and high-altitude route data.

c) The System must [655] provide preferential routes.

d) The System must [656] provide the user with the opportunity to select a preferential route from the maintained data when the user provides a departure point and destination.

e) The System must [657] provide the capability to insert the preferential route data into the route field of the flight plan when the user selects a preferential route.

3.1.1.2.11 Master Flight Plans

The System incorporates a feature that automatically populates fields based on stored Master Flight Plan (MFP) data. The MFP data contains information specific to an aircraft and is matched based on the Aircraft ID field.

a) The System must [658] provide the capability to enable or disable the field auto population function based on user preference.

b) The System must [659] automatically populate fields corresponding to data stored in the MFP Database when the capability has been enabled.

c) The System must [660] attempt to match the Aircraft ID entered to one stored in the MFP Database.

    1) The System must [661] automatically populate the following fields of a matched Aircraft ID with their corresponding MFP data.

        a. The System must [662] populate the Aircraft Type field for the matched Aircraft.

        b. The System must [663] populate the True Airspeed field for the matched Aircraft.

    c.   The System must [664] populate the Aircraft Color field for the matched Aircraft.

    d.   The System must [665] populate the Pilot Data field with "MFP" for the matched Aircraft.

3.1.1.2.12 Aircraft Movement Message Processing

3.1.1.2.12.1   Aircraft Movement Messages Transmitted

The System validates and formats aircraft movement messages for transmission to internal and external facilities.

a)   The System must [666] process the data in the Remarks field such that only the appropriate portions of the Remarks field data are included in the message upon transmit.

    1)   The System must [667] transmit the appropriate portion of the remarks to the facility responsible for the departure or other address specified by the user.

    2)   The System must [668] transmit the appropriate portion of the remarks to the facility responsible for the destination.

    3)   The System must [669] transmit the appropriate portion of the remarks to the addresses contained in the Closure Points field.

    4)   The System must [670] transmit the appropriate portion of the remarks to the ARTCC responsible for the departure or other address specified by the user.

    5)   The System must [671] retain the appropriate portion of the remarks to remain local to the facility.

b)   The System must [672] transmit to the Air Marine Operations Center (AMOC) a copy of all Aircraft Movement Messages transmitted from the System.

3.1.1.2.12.1.1 Civil Domestic Flight Notification Message

a)   The System must [673] format Civil Domestic Flight Notification messages for transmit.

b)   The System must [674] validate Civil Domestic Flight Notification messages for transmit.

c)   The System must [675] place an entry on the Suspense List for the Civil Domestic Flight Notification message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.2 Military Flight Notification Message

a)   The System must [676] format Military Flight Notification messages for transmit.

b)   The System must [677] validate Military Flight Notification messages for transmit.

c)   The System must [678] place an entry on the Suspense List for the Military Flight Notification message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.3 Departure Message

a)   The System must [679] provide the capability to input Departure messages for transmit.

b)   The System must [680] validate Departure messages for transmit.

c)   The System must [681] place an entry on the Suspense List for the Departure message not awaiting acknowledgement upon transmit.

3.1.1.2.12.1.4 ICAO Flight Plan Message

a)   The System must [682] format ICAO Flight Plan messages for transmit.

b)   The System must [683] validate ICAO Flight Plan messages for transmit.

c)   The System must [684] place an entry on the Suspense List for the ICAO Flight Plan message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.5 ICAO Departure Message

a)   The System must [685] format ICAO Departure messages for transmit.

b)   The System must [686] validate ICAO Departure messages for transmit.

c)   The System must [687] place an entry on the Suspense List for the ICAO Departure message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.6 IFR Flight Plan Message

a)   The System must [688] format IFR Flight Plan messages for transmit.

b)   The System must [689] validate IFR Flight Plan messages for transmit.

c)   The System must [690] place an entry on the Suspense List for the IFR Flight Plan message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.7 Stereo Flight Plan Message

a)   The System must [691] format Stereo Flight Plan messages for transmit.

b)   The System must [692] validate Stereo Flight Plan messages for transmit.

c)   The System must [693] place an entry on the Suspense List for the Stereo Flight Plan message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.8 DVFR Flight Plan Message

a)   The System must [694] format DVFR Flight Plan messages for transmit.

b)   The System must [695] validate DVFR Flight Plan messages for transmit.

c)   The System must [696] place an entry on the Suspense List for the DVFR Flight Plan message not awaiting acknowledgement upon transmit.

3.1.1.2.12.1.9 Proposed VFR Flight Plan Message

a)   The System must [697] format Proposed VFR Flight Plan messages for transmit.

b)   The System must [698] validate Proposed VFR Flight Plan messages for transmit.

c)   The System must [699] place an entry on the Suspense List for the Proposed VFR Flight Plan message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.10 Proposed IFR Flight Plan Message

a)   The System must [700] format Proposed IFR Flight Plan messages for transmit.

b) The System must [701] validate Proposed IFR Flight Plan messages for transmit.

c) The System must [702] place an entry on the Suspense List for the Proposed IFR Flight Plan message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.11 Cancellation Message

a) The System must [703] provide the capability to input Cancellation messages for transmit.

b) The System must [704] validate Cancellation messages for transmit.

c) The System must [705] place an entry on the Suspense List for the Cancellation message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.12 Arrival Message

a) The System must [706] provide the capability to input Arrival messages for transmit.

b) The System must [707] validate Arrival messages for transmit.

c) The System must [708] place an entry on the Suspense List for the Arrival message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.13 Change ETA Message

a) The System must [709] provide the capability to input Change ETA messages for transmit.

b) The System must [710] validate Change ETA messages for transmit.

c) The System must [711] place an entry on the Suspense List for the Change ETA message awaiting acknowledgement upon transmit.

3.1.1.2.12.1.14 Roger Message

a) The System must [712] format Roger messages for transmit.

b) The System must [713] validate Roger messages for transmit.

c) The System must [714] place an entry on the Suspense List for the Roger message not awaiting acknowledgement upon transmit.

3.1.1.2.12.2   Aircraft Movement Messages Received

The System receives and validates aircraft movement messages from internal and external facilities. The System accepts and processes only those aircraft movement messages that are in accordance with the appropriate formats, using NAS MD 300 series and FAA Order 7110.10 as a guide.

3.1.1.2.12.2.1 Civil Domestic Flight Notification Message

a) The System must [715] accept Civil Domestic Flight Notification messages from external facilities.

b) The System must [716] validate Civil Domestic Flight Notification messages upon receipt.

c) The System must [717] transmit a Roger message to the facility that originated the message upon successful validation of the Civil Domestic Flight Notification message.

d)   The System must [718] format the message into a flight plan entry upon successful validation of the Civil Domestic Flight Notification message.

e)   The System must [719] add an entry to the Inbound List for the flight plan upon successful validation of the Civil Domestic Flight Notification message.

f)   The System must [720] place the message on the Service B (SVCB) Message List when an error is encountered while validating a received Civil Domestic Flight Notification message.

3.1.1.2.12.2.2 Military Flight Notification Message

a)   The System must [721] accept Military Flight Notification messages from external facilities.

b)   The System must [722] validate Military Flight Notification messages upon receipt.

c)   The System must [723] transmit a Roger message to the facility that originated the message upon successful validation of the Military Flight Notification message.

d)   The System must [724] format the message into a flight plan entry upon successful validation of the Military Flight Notification message.

e)   The System must [725] add an entry to the Inbound List for the flight plan upon successful validation of the Military Flight Notification message.

f)   The System must [726] place the message on the SVCB Message List when an error is encountered while validating a received Military Flight Notification message.

3.1.1.2.12.2.3 Departure Message

a)   The System must [727] accept Departure messages from external facilities.

b)   The System must [728] validate Departure messages upon receipt.

c)   The System must [729] place the message on the SVCB Message List upon successful validation of the Departure message.

d)   The System must [730] place the message on the SVCB Message List when an error is encountered while validating a received Departure message.

3.1.1.2.12.2.4 ICAO Flight Plan Message

a)   The System must [731] accept ICAO Flight Plan messages from external facilities.

b)   The System must [732] validate ICAO Flight Plan messages upon receipt.

c)   The System must [733] transmit a Roger message to the facility that originated the message upon successful validation of the ICAO Flight Plan message.

d)   The System must [734] format the message into a flight plan entry upon successful validation of the ICAO Flight Plan message.

e)   The System must [735] add an entry to the Proposed List upon successful validation of the ICAO Flight Plan message.

f)   The System must [736] place the message on the SVCB Message List when an error is encountered while processing a received ICAO Flight Plan message.

3.1.1.2.12.2.5 ICAO Departure Message

a) The System must [737] accept ICAO Departure messages from external facilities.

b) The System must [738] validate ICAO Departure messages upon receipt.

c) The System must [739] transmit a Roger message to the facility that originated the message upon successful validation of the ICAO Departure message.

d) The System must [740] search the flight plans on the Proposed List for the corresponding ICAO flight plan upon successful validation of the ICAO Departure message.

e) The System must [741] replace the ICAO flight plan information in the matching Proposed List flight plan entry with the information contained in the ICAO Departure message.

f) The System must [742] move the corresponding Proposed List flight plan entry to the Inbound List.

g) The System must [743] place the message on the SVCB Message List when an error is encountered while processing a received ICAO Departure message.

3.1.1.2.12.2.6 Proposed VFR Flight Plan Message

a) The System must [744] accept Proposed VFR Flight Plan messages from external facilities.

b) The System must [745] validate Proposed VFR Flight Plan messages upon receipt.

c) The System must [746] transmit a Roger message to the facility that originated the message upon successful validation of the Proposed VFR Flight Plan message.

d) The System must [747] format the message into a flight plan entry including any transmitted Closure Points addresses upon successful validation of the Proposed VFR Flight Plan message.

   1) The flight plan entry that is created must [748] include all flight plan fields if the flight plan was originally filed within the System.

e) The System must [749] automatically address the Closure Points field with the tie-in facility address for the destination airport if no manually entered notification addresses were transmitted in the message upon successful completion of the validation.

f) The System must [750] add an entry to the Proposed List for the flight plan upon successful validation of the Proposed VFR Flight Plan message.

g) The System must [751] place the message on the SVCB Message List when an error is encountered while validating a received Proposed VFR Flight Plan message.

3.1.1.2.12.2.7 Proposed IFR Flight Plan Message

a) The System must [752] accept Proposed IFR Flight Plan messages from external facilities.

b) The System must [753] validate Proposed IFR Flight Plan messages upon receipt.

c) The System must [754] transmit a Roger message to the facility that originated the message upon successful validation of the Proposed IFR Flight Plan message.

d)   The System must [755] format the message into a flight plan entry including any transmitted Closure Points addresses upon successful validation of the Proposed IFR Flight Plan message.

   1)   The flight plan entry that is created must [756] include all flight plan fields if the flight plan was originally filed within the System.

e)   The System must [757] automatically address the Closure Points field with the tie-in facility address for the destination airport if no manually entered notification addresses were transmitted in the message upon successful completion of the validation.

f)   The System must [758] add an entry to the Proposed List for the flight plan upon successful validation of the Proposed IFR Flight Plan message.

g)   The System must [759] place the message on the SVCB Message List when an error is encountered while validating a received Proposed IFR Flight Plan message.

3.1.1.2.12.2.8 Cancellation Message

a)   The System must [760] accept Cancellation messages from external facilities.

b)   The System must [761] validate Cancellation messages upon receipt.

c)   The System must [762] transmit a Roger message to the facility that originated the message upon successful validation of the Cancellation message.

d)   The System must [763] place the message on the SVCB Message List upon successful validation of the Cancellation message.

e)   The System must [764] place the message on the SVCB Message List when an error is encountered while processing a Cancellation message.

3.1.1.2.12.2.9 Arrival Message

a)   The System must [765] accept Arrival messages from external facilities.

b)   The System must [766] validate Arrival messages upon receipt.

c)   The System must [767] transmit a Roger message to the facility that originated the message upon successful validation of the Arrival message.

d)   The System must [768] place the message on the SVCB Message List upon successful validation of the Arrival message.

e)   The System must [769] place the message on the SVCB Message List when an error is encountered while processing an Arrival message.

3.1.1.2.12.2.10 Change ETA Message

a)   The System must [770] accept Change ETA messages from external facilities.

b)   The System must [771] validate Change ETA messages upon receipt.

c)   The System must [772] transmit a Roger message to the facility that originated the message upon successful validation of the Change ETA message.

d)   The System must [773] search the flight plans on the Inbound List for the corresponding flight plan upon successful validation of the Change ETA message.

e)   The System must [774] automatically update the ETA of the corresponding flight plan from the Inbound List.

f) The System must [775] place a message on the SVCB Message List after updating the corresponding flight plan.

g) The System must [776] place the message on the SVCB Message List when an error is encountered while processing a Change ETA message.

3.1.1.2.12.2.11 Roger Message

a) The System must [777] accept Roger messages from external facilities.

b) The System must [778] validate Roger messages upon receipt.

c) The System must [779] search the messages on the Suspense List for the corresponding transmitted message upon successful validation of the Roger message.

d) The System must [780] automatically update the Suspense List entry to indicate that the message has been acknowledged by the originator of the Roger message.

e) The System must [781] remove the message from the Suspense List when no other addresses for the corresponding message are awaiting acknowledgement.

f) The System must [782] place the message on the SVCB Message List when an error is encountered while processing a Roger message.

3.1.1.2.12.2.12 Reject Message

a) The System must [783] accept Reject messages from external facilities.

b) The System must [784] validate Reject messages upon receipt.

c) The System must [785] search the messages on the Suspense List for the corresponding transmitted message upon successful validation of the Reject message.

d) The System must [786] automatically update the Suspense List entry to indicate that the message has been rejected by the originator of the Reject message.

e) The System must [787] place a message on the SVCB Message List to alert the user of the Reject message after updating the corresponding Suspense List entry.

f) The System must [788] provide the capability for the user to correct and retransmit the Flight Plan associated with the Reject message.

g) The System must [789] place the message on the SVCB Message List when an error is encountered while processing a Reject message.

3.1.1.2.12.2.13 Error Message

a) The System must [790] accept Error messages from external facilities.

b) The System must [791] validate Error messages upon receipt.

c) The System must [792] search the messages on the Suspense List for the corresponding transmitted message upon successful validation of the Error message.

d) The System must [793] automatically update the Suspense List entry to indicate that the message has been determined to be in error by the originator of the Error message.

e) The System must [794] place a message on the SVCB Message List to alert the user of the Error message after updating the corresponding Suspense List entry.

f) The System must [795] provide the capability for the user to correct and retransmit the flight plan associated with the Error message.

g) The System must [796] place the message on the SVCB Message List when an error is encountered while processing an Error message.

3.1.1.2.13 Control Message Processing

3.1.1.2.13.1 Control Messages Received

The System validates and processes control messages received from internal and external facilities.

3.1.1.2.13.1.1 SUA Messages

a) The System must [797] separate messages containing more than one SUA message into individual messages.

3.1.1.2.13.1.1.1 IFR Military Training Route (IR) Messages

a) The System must [798] accept IR messages from external facilities.
b) The System must [799] validate IR messages upon receipt.
c) The System must [800] store IR messages upon successful validation.
d) The System must [801] cancel IR messages when corresponding cancellation messages are received.
e) The System must [802] place the message on the SVCB Message List when an error is encountered while processing an IR message.

3.1.1.2.13.1.1.2 VFR Military Training Route (VR) Messages

a) The System must [803] accept VR messages from external facilities.
b) The System must [804] validate VR messages upon receipt.
c) The System must [805] store VR messages upon successful validation.
d) The System must [806] cancel VR messages when corresponding cancellation messages are received.
e) The System must [807] place the message on the SVCB Message List when an error is encountered while processing a VR message.

3.1.1.2.13.1.1.3 MOA Messages

a) The System must [808] accept MOA messages from external facilities.
b) The System must [809] validate MOA messages upon receipt.
c) The System must [810] store MOA messages upon successful validation.
d) The System must [811] cancel MOA messages when corresponding cancellation messages are received.
e) The System must [812] place the message on the SVCB Message List when an error is encountered while processing a MOA message.
f) The System must [813] accept Temporary MOA messages from external facilities.
g) The System must [814] validate Temporary MOA messages upon receipt.
h) The System must [815] store Temporary MOA messages upon successful validation.

i)   The System must [816] cancel Temporary MOA messages when corresponding cancellation messages are received.

j)   The System must [817] place the message on the SVCB Message List when an error is encountered while processing a Temporary MOA message.

3.1.1.2.13.1.1.4   Warning Area Messages

a)   The System must [818] accept Warning Area messages from external facilities.

b)   The System must [819] validate Warning Area messages upon receipt.

c)   The System must [820] store Warning Area messages upon successful validation.

d)   The System must [821] cancel Warning Area messages when corresponding cancellation messages are received.

e)   The System must [822] place the message on the SVCB Message List when an error is encountered while processing a Warning Area message.

3.1.1.2.13.1.1.5   Controlled Firing Areas Messages

a)   The System must [823] accept Controlled Firing Areas messages from external facilities.

b)   The System must [824] validate Controlled Firing Areas messages upon receipt.

c)   The System must [825] store Controlled Firing Areas messages upon successful validation.

d)   The System must [826] cancel Controlled Firing Areas messages when corresponding cancellation messages are received.

e)   The System must [827] place the message on the SVCB Message List when an error is encountered while processing a Controlled Firing Areas message.

3.1.1.2.13.1.2 ATCSCC Messages

a)   The System must [828] accept ATCSCC messages from external facilities.

b)   The System must [829] validate ATCSCC messages upon receipt.

c)   The System must [830] reassemble multi-part ATCSCC messages.

    1)   All parts of the ATCSCC message must [831] be received.

    2)   All parts of the ATCSCC message must [832] be valid.

d)   The System must [833] store ATCSCC messages upon successful validation.

e)   The System must [834] cancel ATCSCC messages when corresponding cancellation messages are received.

f)   The System must [835] generate ATCSCC Alert Notification Messages when a new ATCSCC Message is received.

g)   The System must [836] generate ATCSCC Alert Notification Messages when an ATCSCC Message is cancelled.

h)   The System must [837] broadcast ATCSCC Alert Notification Messages to active workstations.

1) The System must [838] filter ATCSCC Alert Notification Messages to broadcast only those ATCSCCs within an area defined by the ATCSCC Area facility parameter.

i) The System must [839] place the message on the SVCB Message List when an error is encountered while processing an ATCSCC message.

3.1.1.2.13.1.3 LE Messages

The System processes Law Enforcement (LE) Messages received from El Paso Intelligence Center (EPIC). The System handles three types of LE messages: additions, deletions, and monthly summaries. If a LE addition message arrives, the Aircraft ID contained in the message will be added to the LE Message List. If a LE deletion message arrives, the Aircraft ID contained in the message will be deleted from the LE Message List. If a LE monthly summary message arrives, the current active LE Message List is updated with only the list of Aircraft IDs contained in the monthly summary message.

When a LE addition or summary message arrives containing one or more Aircraft IDs, the System searches the history database for Aircraft ID matches. If a match is found, the System provides the capability to generate an alarm. Comparison of Aircraft IDs against the active LE List is ongoing whenever a flight plan is filed or Aircraft ID is logged. As matches occur, the system provides the capability to generate an alert on the LE List.

a) The System must [840] accept LE messages from EPIC.

b) The System must [841] validate LE messages upon receipt.

c) The System must [842] provide an LE List available to the user upon request.

d) The System must [843] provide the capability to sort the LE Message List by any field.

1) The default sort for the LE Message List must [844] be the Aircraft ID.

e) The System must [845] store LE messages upon successful validation.

f) The System must [846] keep Aircraft IDs on the LE Message List until they are deleted.

g) The System must [847] search the history database for a match on the associated Aircraft ID when an LE addition message is received.

1) The System must [848] generate an alarm when an Aircraft ID in the history database matches with the Aircraft ID in the LE addition message.

2) The System must [849] add an entry to the LE Message List based upon the current sort upon receipt of a new valid LE addition message.

h) The System must [850] search the history database for matches on all new associated Aircraft IDs when an LE monthly summary message is received.

1) The System must [851] generate an alarm for each match when an Aircraft ID in the history database matches with a new Aircraft ID in the LE monthly summary message.

2) The System must [852] update the LE Message List to include only those Aircraft IDs contained in the summary message based upon the current sort upon receipt of a new valid LE monthly summary message.

i)   The System must [853] delete the associated entry from the LE Message List upon receipt of a valid LE deletion message.

j)   The System must [854] search for Aircraft ID matches in the LE Message List when a Flight Plan is filed and generate an alarm if a match is found.

k)   The System must [855] search for Aircraft ID matches in the LE Message List when an Aircraft ID is logged and generate an alarm if a match is found.

l)   The System must [856] place the message on the SVCB Message List when an error is encountered while processing an LE message.

3.1.1.2.14 Flight Plan Conversion

The System provides the ability to convert data between ICAO and domestic flight plan masks.

3.1.1.2.14.1   ICAO to Domestic Conversion

a)   The System must [857] process and convert ICAO flight plan data to domestic flight plan data upon request by a user.

   1)   The System must [858] convert the ICAO Aircraft Type, Equipment List, and Number of Aircraft fields into a single Domestic Aircraft Type field containing slash characters for Equipment List and Number of Aircraft.

   2)   The System must [859] convert ICAO IFR Flight Rules to Domestic IFR Flight Rules.

   3)   The System must [860] convert ICAO IFR/VFR Flight Rules to Domestic IFR Flight Rules.

   4)   The System must [861] convert ICAO VFR Flight Rules to Domestic VFR Flight Rules.

   5)   The System must [862] convert ICAO VFR/IFR Flight Rules to Domestic VFR Flight Rules.

   6)   The System must [863] convert ICAO Location IDs to Domestic Location IDs in the Departure, Destination, and Alternate Airport fields.

   7)   The System must [864] convert ICAO Altitudes to Domestic Altitudes.

   8)   The System must [865] convert ICAO Air Speeds to Domestic Air Speeds.

   9)   The System must [866] convert ICAO Latitude and Longitudes to Domestic Latitude and Longitudes contained in the Route field.

   10) The System must [867] transfer all fields with identical ICAO and Domestic formats from the ICAO flight plan mask to the Domestic flight plan mask.

3.1.1.2.14.2   Domestic to ICAO Conversion

a)   The System must [868] process and convert domestic flight plan data to ICAO flight plan data upon request by a user.

   1)   The System must [869] convert the Domestic Aircraft Type field into the ICAO Aircraft Type, Equipment List, and Number of Aircraft fields.

   2)   The System must [870] convert Domestic Location IDs to ICAO Location IDs in the Departure, Destination, and Alternate Airport fields.

3) The System must [871] convert Domestic Altitudes to ICAO Altitudes.

4) The System must [872] convert Domestic Air Speeds to ICAO Air Speeds.

5) The System must [873] convert Domestic Latitude and Longitudes to ICAO Latitude and Longitudes contained in the Route field.

6) The System must [874] convert Domestic VFR Flight Rules to ICAO VFR Flight Rules.

7) The System must [875] convert DVFR Flight Rules to ICAO VFR Flight Rules.

8) The System must [876] convert Military VFR Flight Rules to ICAO VFR Flight Rules.

9) The System must [877] convert Domestic IFR Flight Rules to ICAO IFR Flight Rules.

10) The System must [878] convert Military IFR Flight Rules to ICAO IFR Flight Rules.

11) The System must [879] convert Stereo Flight Rules to ICAO IFR Flight Rules.

12) The System must [880] transfer all fields with identical Domestic and ICAO formats from the Domestic flight plan mask to the ICAO flight plan mask.

3.1.1.2.15 Flight Plan Information History

The System will maintain active flight data and a history of flight data. This flight data may be searched and displayed.

a) The System must [881] provide the capability to import flight plan information history into a flight plan mask.

b) The System must [882] * provide the capability to import flight plan information history into a digital flight progress strip.

3.1.1.2.15.1   Display History of User Information

The System incorporates a history of flight transaction information for a particular logon session. The information is based on the flight transactions performed by a user at a workstation during a logon session.

a) The System must [883] display a history of flight data transactions performed by a user at a workstation during a logon session.

1) The flight data transaction history must [884] contain Inflight Briefings.

2) The flight data transaction history must [885] contain Preflight Briefings.

3) The flight data transaction history must [886] contain Flight Plan Validations.

4) The flight data transaction history must [887] contain Flight Plan Filings.

5) The flight data transaction history must [888] contain Flight Plan Amendments.

6) The flight data transaction history must [889] contain Flight Plan Activations.

7) The flight data transaction history must [890] contain Flight Plan Cancellations.

8) The flight data transaction history must [891] contain Flight Plan Closures.

3.1.1.2.15.2   Display Local Facility Completed Flight Data Transactions

a)   The System must [892] display an active Flight Data Log of completed flight data transactions for the local facility from any workstation.

b)   The System must [893] display completed flight data transactions for a number of days specified in the History Data Retention time system parameter.

c)   The System must [894] provide the capability to retrieve flight data by time.

d)   The System must [895] provide the capability to retrieve flight data by any field.

   1)   The System must [896] provide the capability to retrieve flight data by any field using a wildcard search.

3.1.1.2.16 Display Current Flight Plan

a)   The System must [897] display current flight plan data information by Aircraft ID.

b)   The System must [898] provide the capability to select from a list of matching active flight plans when more than one active flight plan matches the requested Aircraft ID.

c)   The System must [899] provide the capability to display current flight plan data information using a wildcard search.

d)   The System must [900] provide the capability to display at least 15 flight plan masks simultaneously.

3.1.1.2.16.1   Display Partial Flight Plans

The Partial Flight Plan List contains flight plans that have not yet been filed. The only required field for a partial flight plan is the Aircraft ID.

a)   The System must [901] provide the capability to create Partial Flight Plans.

   1)   The System must [902] require the Aircraft ID field, as a minimum, for a Partial Flight Plan.

b)   The System must [903] provide the capability to store Partial Flight Plans.

   1)   The System must [904] provide the capability to store at least 20 Partial Flight Plans per workstation.

   2)   The System must [905] provide the capability to store at least 20 Partial Flight Plans per user.

   3)   The System must [906] retain stored Partial Flight Plans after logoff.

   4)   The System must [907] restore stored Partial Flight Plans upon logon.

c)   The System must [908] provide the capability to retrieve Partial Flight Plans.

d)   The System must [909] provide the capability to edit Partial Flight Plans.

e)   The System must [910] provide the capability to delete Partial Flight Plans.

f)   The System must [911] provide the capability to validate Partial Flight Plans.

g)   The System must [912] provide the capability to file Partial Flight Plans.

h)   The System must [913] provide the capability to display Partial Flight Plans on the Partial Flight Plan List.

1) The System must [914] provide the capability to sort the Partial Flight Plan List by any field.

    a.   The default sort for the Partial Flight Plan List must [915] be the Aircraft ID.

2) The Partial Flight Plan List must [916] indicate the actions that have been performed on each Partial Flight Plan in the list.

3.1.1.2.17 Display Flight Plan Lists

3.1.1.2.17.1   Display Prestored Flight Plan List

The Prestored List contains flight plans that have been previously stored with or without an associated schedule. A scheduled prestored flight plan is one that is scheduled to be automatically added to the Proposed List at a specific time. A non-scheduled prestored flight plan is one that has not been scheduled to be added automatically to the Proposed List. The System provides the capability to automatically add a scheduled Prestored Flight Plan to the Proposed List at a configurable time period prior to the estimated time of departure.

a) The System must [917] provide a database for prestored flight plans.

b) The System must [918] store a minimum of 20,000 prestored flight plans.

c) The System must [919] provide the capability to create prestored flight plans.

d) The System must [920] provide the capability to store prestored flight plans with an associated schedule.

e) The System must [921] provide the capability to store prestored flight plans without an associated schedule.

f) The System must [922] provide the capability to retrieve prestored flight plans.

g) The System must [923] provide the capability to edit prestored flight plans.

h) The System must [924] provide the capability to delete prestored flight plans.

i) The System must [925] provide the capability to validate prestored flight plans.

j) The System must [926] provide the capability to file prestored flight plans.

k) The System must [927] provide the capability to automatically add scheduled prestored flight plans to the Proposed List at the ETD minus the Prestored time system parameter.

l) The System must [928] provide the capability to display prestored flight plans on the Prestored Flight Plan List.

m) The System must [929] provide the capability to sort the Prestored Flight Plan List by any field.

    1)   The default sort for the Prestored Flight Plan List must [930] be the Aircraft ID field.

3.1.1.2.17.2   Display Proposed Flight Plan List

The Proposed List contains flight plans that are awaiting activation. These flight plans will be transmitted from the local facility.

Flight plans that have been scheduled for departure are dropped from the Proposed List when the ETD is no longer within the system configurable parameter time period.

a) The System must [931] provide the capability to sort the Proposed List by any field.

　1) The default sort for the Proposed Flight Plan List must [932] be the ETD field.

b) The System must [933] add the entry to the Proposed List based upon the current sort when a new entry is received.

c) The System must [934] automatically display updated active flight plan information on the Proposed List.

d) The System must [935] provide the capability to retrieve a flight plan corresponding to a Proposed List entry.

　1) The System display all flight plan fields for a flight plan originally filed with the System.

e) The System must [936] provide the capability to amend the flight plan corresponding to a Proposed List entry.

f) The System must [937] provide the capability to cancel the flight plan corresponding to a Proposed List entry.

　1) The System must [938] add the flight plan to the Inactive Flight Plan List upon cancellation of the Proposed List entry.

g) The System must [939] automatically delete flight plans from the Proposed List at ETD plus the Proposed Flight Plan Drop Interval time system parameter.

　1) The System must [940] add an entry to the Inactive List when a flight plan is automatically deleted from the Proposed List.

h) The System must [941] display the associated beacon code of a DVFR Flight Plan on the Proposed List.

i) The System must [942] provide the capability to modify the beacon code of a DVFR Flight Plan on the Proposed List.

3.1.1.2.17.3   Display Suspense List

The Suspense List contains flight plans and other SVCB messages that have been transmitted from the facility and are awaiting acknowledgement.

a) The System must [943] provide the capability to sort the Suspense List by any field.

　1) The default sort for the Suspense List must [944] be the transmit time.

b) The System must [945] add the entry to the Suspense List based upon the current sort when a new entry is received.

c) The System must [946] automatically display updated active flight plan information on the Suspense List.

d)   The System must [947] provide the capability to manually acknowledge a message on the Suspense List.

e)   The System must [948] provide the capability to manually re-transmit a message on the Suspense List.

f)   The System must [949] provide the capability to retrieve the message text corresponding to a Suspense List entry.

g)   The System must [950] provide the capability to retrieve a flight plan corresponding to a Suspense List entry into a Flight Plan mask.

h)   The System must [951] provide the capability to notify the user when a message on the Suspense List is overdue for an acknowledgement.

    1)   A message must [952] be considered overdue for acknowledgement at the transmit time plus the Acknowledgement time system parameter.

i)   The System must [953] provide the capability to notify the user when a message on the Suspense List was unable to transmit.

j)   The System must [954] provide the capability to notify the user when a message on the Suspense List received a Reject message in response to transmission of the message.

k)   The System must [955] provide the capability to notify the user when a message on the Suspense List was received an Error message in response to transmission of the message.

l)   The System must [956] provide the capability to edit a message corresponding to a Suspense List entry that is awaiting transmission.

m)   The System must [957] automatically delete messages from the Suspense List when all acknowledgments have been received for the message.

3.1.1.2.17.4   Display Inbound Flight Plan List

The Inbound List contains flight plans that are inbound to airports within the local facility's flight plan area of responsibility. These flight plans are awaiting closure or cancellation.

The System provides the capability to notify the user when a flight plan is overdue and to generate an alarm to notify the user.

a)   The System must [958] provide the capability to sort the Inbound List by any field.

    1)   The default sort for the Inbound List must [959] be the ETA.

b)   The System must [960] add the entry to the Inbound List based upon the current sort when a new entry is received.

c)   The System must [961] automatically display updated active flight plan information on the Inbound List.

d)   The System must [962] provide the capability to retrieve a flight plan corresponding to an Inbound List entry.

    1)   The System must [963] display all flight plan fields for a flight plan originally filed within the System.

e)   The System must [964] provide the capability to add a flight plan to the Inbound List.

1) The System must [965] validate the ETA of a flight plan added to the Inbound List to be a time in the past, present or future.

f) The System must [966] provide the capability to amend the ETA of a flight plan corresponding to an Inbound List entry.

g) The System must [967] provide the capability to close the flight plan corresponding to an Inbound List entry.

1) The System must [968] add the flight plan to the Inactive Flight Plan List upon closure of the Inbound List entry.

h) The System must [969] provide the capability to cancel the flight plan corresponding to an Inbound List entry.

1) The System must [970] add the flight plan to the Inactive Flight Plan List upon cancellation of the Inbound List entry.

i) The System must [971] provide the capability to notify the user when a flight plan on the Inbound List is overdue.

1) A flight plan must [972] be considered overdue at the ETA plus the Inbound Overdue system parameter.

j) The System must [973] * provide the capability to notify the user when a flight plan on the Inbound List is Automatic Flight Plan Tracking (AFPT) capable.

1) The System must [974] * indicate when the AFPT data is being received normally.

2) The System must [975] * indicate when no AFPT data has been received within the AFPT Communication time system parameter.

3) The System must [976] * indicate when the AFPT data indicates the aircraft has stopped forward movement within the AFPT Stopped Movement system parameter.

k) The System must [977] display the associated beacon code of a DVFR Flight Plan on the Inbound List.

l) The System must [978] provide the capability to modify the beacon code of a DVFR Flight Plan on the Inbound List.

3.1.1.2.17.5   Display Inactive Flight Plan List

The Inactive List contains flight plans that have timed-out, have been closed or have been cancelled. For each Inactive List entry, the System indicates which action (time-out, close or cancel) added the corresponding flight plan to the list.

a) For each entry on the Inactive List, the System must [979] indicate which action added the corresponding flight plan to the Inactive List.

b) The System must [980] provide the capability to sort the Inactive List by any field.

1) The default sort for the Inactive List must [981] be the time that the flight plan was added to the Inactive List.

c) The System must [982] add the entry to the Inactive List based upon the current sort when a new entry is received.

d) The System must [983] provide the capability to retrieve a flight plan corresponding to an Inactive List entry.

e) The System must [984] provide the capability to delete an entry from the Inactive List.

f) The System must [985] automatically delete entries from the Inactive List at the time of addition plus the Inactive Flight Plan Drop time system parameter.

3.1.1.2.18 General Message Processing

3.1.1.2.18.1   General Messages Transmitted

The System provides the capability for a user to create and transmit general messages to an external facility.

a) The System must [986] provide the capability to transmit general messages to external facilities.

b) The System must [987] provide the capability to transmit general messages to multiple addresses.

c) The System must [988] provide the capability to input general messages for transmission.

d) The System must [989] provide the capability to automatically break up large messages into separate messages of an acceptable size.

   1) Lines in a message must [990] be no longer than 69 characters in length.

   2) Messages must [991] contain no more than 20 lines.

   3) Messages must [992] be no longer than 1380 characters in length.

e) The System must [993] validate general messages for transmission.

f) The System must [994] provide the capability to indicate whether or not an acknowledgement is required for each address for the general message.

g) The System must [995] add an entry to the Suspense List for the general message, awaiting acknowledgement for each address indicated when the message was input after transmission.

h) The System must [996] transmit to the AMOC a copy of all General Messages transmitted from the System.

3.1.1.2.18.2   General Messages Received

a) The System must [997] validate general messages received from external systems.

b) The System must [998] reassemble recognized multi-part general messages.

c) The System must [999] transmit required Roger messages to the sending facility.

d) The System must [1000] add the general message to the SVCB Message List for display to a user upon receipt of a general message.

3.1.1.3 Inflight Processing

3.1.1.3.1 Inflight Functions

a) The System must [1001] provide the capability for users to perform Inflight functions in accordance with FAA Order 7110.10.

3.1.1.3.2 Digital Flight Progress Strips

The System provides a handwriting input device to create and edit digital flight progress strips. Digital flight progress strips can also be created in the Active Flight Workspace (from the main electronic strip-bay or the airport advisory strip-bay), flight plan masks, and Inflight work queues.

Some flight planning functions can be performed with a digital flight progress strip directly from the handwriting input device including filing, logging, weather briefing, canceling, closing, amending and activating a flight plan.

a) The System must [1002] * provide a handwriting input device.

b) The System must [1003] * provide the capability to create a digital flight progress strip using the handwriting input device.

    1) The digital flight progress strip must [1004] * include an Aircraft ID field.

    2) The digital flight progress strip must [1005] * include an Aircraft Type/Special Equipment field.

    3) The digital flight progress strip must [1006] * include a TAS/Alt field.

        a. The TAS/Alt field must [1007] * include an Airspeed field.

        b. The TAS/Alt field must [1008] * include an Altitude field.

    4) The digital flight progress strip must [1009] * include a Departure field.

    5) The digital flight progress strip must [1010] * include a Route field.

    6) The digital flight progress strip must [1011] * include a Destination field.

    7) The digital flight progress strip must [1012] * include a Time of Departure field.

    8) The digital flight progress strip must [1013] * include an ETA field.

    9) The digital flight progress strip must [1014] * include an ETE field.

    10) The digital flight progress strip must [1015] * include a Flight Type field.

    11) The digital flight progress strip must [1016] * include a Remarks field.

    12) The digital flight progress strip must [1017] * include a Time of Contact with Pilot field.

    13) The digital flight progress strip must [1018] * include an Information Received from Pilot/Another Facility field.

    14) The digital flight progress strip must [1019] * include a Data Issued to the Aircraft field.

c) The System must [1020] * provide the capability to display an existing digital flight progress strip on the handwriting input device.

d) The System must [1021] * provide the capability to edit a digital flight progress strip using the handwriting input device.

e) The System must [1022] * provide the capability for the user to perform flight planning functions from the handwriting input device.

    1) The handwriting input device must [1023] * file flight plans.

    2) The handwriting input device must [1024] * log aircraft contacts.

        a. The log time must [1025] * default to the current time.

        b. The System must [1026] * log airport advisories.

        c. The System must [1027] * log pilot briefings.

        d. The System must [1028] * log Special Visual Flight Rules (SVFR) clearances issued.

        e. The System must [1029] * log IFR clearances issued.

    3) The handwriting input device must [1030] *provide the capability to request a weather briefing.

    4) The handwriting input device must [1031] * cancel a flight plan.

    5) The handwriting input device must [1032] * close a flight plan.

    6) The handwriting input device must [1033] * provide the capability for users to amend a flight plan.

    7) The handwriting input device must [1034] * provide the capability to activate a flight plan.

3.1.1.3.3 Inflight Work Queues

The System maintains a work queue for inflight contacts. The user may perform a variety of functions with the individual queue entries. The queue information is saved when the user closes the queue or logs off and is restored upon logon.

a) The System must [1035] maintain multiple Inflight work queues.

b) The System must [1036] provide an index for the Inflight work queue entries.

c) The System must [1037] provide the capability to add an Inflight work queue entry.

d) The System must [1038] provide the capability to delete an Inflight work queue entry.

e) The System must [1039] provide the capability to display an Inflight work queue entry.

f) The System must [1040] provide the capability to edit an Inflight work queue entry.

g) The System must [1041] provide the capability to log an Inflight work queue entry.

h) The System must [1042] provide the capability to enter notes corresponding to an Inflight work queue entry.

i) The System must [1043] provide the capability to enter the contents of a General Message into an Inflight work queue entry.

j) The System must [1044] provide the capability to create a General Message from the data entered into an Inflight work queue entry.

k) The System must [1045] provide the capability to automatically save the contents of the Inflight work queue upon closure.

l) The System must [1046] provide the capability to automatically retrieve the information from the Inflight work queue when it is opened.

m)   The System must [1047] provide the capability to automatically save the contents of the Inflight work queue upon logoff.

n)   The System must [1048] provide the capability to automatically retrieve the information from the Inflight work queue upon logon.

o)   The System must [1049] provide the capability to populate the information in an Inflight work queue entry from corresponding data on the Proposed List.

p)   The System must [1050] provide the capability to populate the information in an Inflight work queue entry from corresponding data on the Inbound List.

q)   The System must [1051] provide the capability to add a flight plan to the Inbound List using the data in an Inflight work queue entry.

r)   The System must [1052] provide the capability to populate the information in an Inflight work queue entry from corresponding data on the Contact List.

s)   The System must [1053] * provide the capability to enter the contents of a digital flight progress strip into an Inflight work queue entry.

t)   The System must [1054] * provide the capability to create a digital flight progress strip from the data entered into an Inflight work queue entry.

3.1.1.3.4 Flight Plan Data Transfer

a)   The System must [1055] provide the capability to transfer data from a flight plan mask into an Inflight work queue entry.

b)   The System must [1056] provide the capability to transfer data from an Inflight work queue entry into a flight plan mask.

c)   The System must [1057] * provide the capability to transfer data from a flight plan mask into a digital flight progress strip.

d)   The System must [1058] * provide the capability to transfer data from a digital flight progress strip into a flight plan mask.

e)   The System must [1059] * provide the capability to transfer data from a flight plan mask into a handwriting input device.

f)   The System must [1060] * provide the capability to transfer data from a handwriting input device into a flight plan mask.

3.1.1.3.5 Electronic Strip-Bay

The System maintains a configurable electronic strip-bay, similar to physical flight progress strips.

The strip display can be configured into partitions corresponding to separate airports or other user-defined groupings.

a)   The System must [1061] * provide a user configurable electronic strip-bay.

   1)   The System must [1062] * provide a minimum of 1000 digital flight progress strips for use by the electronic strip-bay.

   2)   The digital flight progress strips must [1063] * display the Aircraft ID field.

   3)   The digital flight progress strips must [1064] * display the Aircraft Type field.

b) The System must [1065] * provide the capability to divide the electronic strip-bay display into sections.

   1) The System must [1066] * provide the capability to sort the digital flight progress strips by any field.

      a. The default sort must [1067] * be the Aircraft ID field.

   2) The System must [1068] * display digital flight progress strips at the top of the electronic strip-bay when added.

      a. The System must [1069] * visually indicate when digital flight progress strips are added to the electronic strip-bay.

      b. The System must [1070] * visually indicate if the flight plan is on the Inbound List.

      c. The System must [1071] * visually indicate if the flight plan is on the Proposed List.

c) The System must [1072] * provide the capability to display individual digital flight progress strips in the active flight workspace.

d) The System must [1073] * provide the capability to store digital flight progress strips in the electronic strip-bay.

e) The System must [1074] * provide the capability to delete a digital flight progress strip from the electronic strip-bay.

f) The System must [1075] * provide the capability to manually arrange the digital flight progress strips in the electronic strip-bay.

g) The System must [1076] * provide the capability to automatically save the contents of the electronic strip-bay upon logoff.

h) The System must [1077] * provide the capability to automatically retrieve the information from the electronic strip-bay upon logon.

i) The System must [1078] * automatically generate digital flight progress strips based on flight plan entries on the Proposed List at the ETD time minus the P-List Strip time facility parameter.

j) The System must [1079] * automatically generate digital flight progress strips based on flight plan entries on the Inbound List at the ETA time minus the I-List Strip time facility parameter.

3.1.1.3.5.1 Active Flight Workspace

The active flight workspace allows the user to create digital flight progress strips without using the handwriting input device. It also allows the user to edit existing digital flight progress strips without using the handwriting input device.

a) The System must [1080] * include an active flight workspace associated with the electronic strip-bay.

b) The System must [1081] * populate the Active Flight Workspace with the current active digital flight progress strip.

c) The System must [1082] * provide the capability to create digital flight progress strips in the Active Flight Workspace

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d)   The System must [1083] * provide the capability to edit digital flight progress strips in the Active Flight Workspace.

3.1.1.3.6 Airport Advisory Display

The airport advisory display contains data pertinent to a specific airport. This information includes a graphical depiction of the airport diagram, current weather and NOTAM information, an Automatic Flight Information Service (AFIS) code, a toggle for the surface area control status, a graphical depiction of airport traffic, an abbreviated strip-bay, a digital flight progress strip active workspace area and a method to request a weather briefing for a specific digital flight progress strip.

a)   The System must [1084] * provide a user configurable airport advisory display that combines stored and real-time information.

3.1.1.3.6.1   Airport Diagram Graphic

The airport diagram graphic displays an earth locatable graphical representation of the runways and taxiways for the specific airport indicated on the airport advisory display. The diagram can be zoomed in and out and can be overlaid with weather and traffic information. The diagram may also indicate specific conditions as specified by NOTAMs such as runway closures.

Reporting points may be manually created to reflect physical locations (i.e., a lighthouse, mountain or other location). The pilot can use these points to help indicate the aircraft's location.

a)   The System must [1085] * display an earth locatable airport diagram graphic on the airport advisory display.

b)   The System must [1086] * provide the capability to display range rings on the airport diagram graphic.

c)   The System must [1087] * provide the capability to zoom the airport diagram graphic.

1)   The System must [1088] * provide a minimum of 16 zoom magnification steps with minimal loss of picture quality.

d)   The System must [1089] * provide the capability to overlay weather data.

e)   The System must [1090] * provide the capability to overlay aeronautical data.

f)   The System must [1091] * provide the capability to overlay NOTAM data.

g)   The System must [1092] * provide the capability to overlay user-created reporting points.

1)   The System must [1093] * provide the capability to create user-created reporting points.

2)   The System must [1094] * provide the capability to delete user-created reporting points.

3.1.1.3.6.2   Weather Information

The airport advisory display provides current weather information specific to the airport indicated on the display.

a)   The System must [1095] * display stored and real-time weather information for the selected airport on the airport advisory display.

    1)   The weather information must [1096] * include the last weather observation transmitted.

    2)   The weather information must [1097] * include the one minute real time weather update from Automated Surface Observation System/Aviation Weather Observation System (ASOS/AWOS), if available.

        a.   The ASOS/AWOS data must [1098] * display the altimeter setting.

        b.   The ASOS/AWOS data must [1099] * display the magnetic wind data.

    3)   The weather information must [1100] * display pilot reports.

    4)   The weather information must [1101] * display weather advisory alerts.

        a.   The weather advisory alerts must [1102] * display WAs.

        b.   The weather advisory alerts must [1103] * display WSs.

        c.   The weather advisory alerts must [1104] * display CWAs.

3.1.1.3.6.3   NOTAMs

The airport advisory display provides NOTAMs pertinent to the airport selected on the display. The NOTAMs may be grouped according to type for display.

a)   The System must [1105] * display stored NOTAMs for the selected airport on the airport advisory display grouped by NOTAM type.

b)   The System must [1106] * be user-selectable to graphically depict airport status information on the airport advisory display.

    1)   The airport status information must [1107] * include Runway Closure indicators.

    2)   The airport status information must [1108] * include Taxiway indicators.

    3)   The airport status information must [1109] * include Personnel and Equipment Working (PAEW) indicators.

    4)   The airport status information must [1110] * include Braking Action indicators.

3.1.1.3.6.4   AFIS Code

The AFIS code is a single alphabetic character representing the most recent version of the AFIS information and should be updated by the specialist to correspond to the latest AFIS version.

a)   The System must [1111] * include a modifiable AFIS code on the airport advisory display.

3.1.1.3.6.5   Surface Area Control Status

Surface area control status information functions as a toggle and indicates who (either the ARTCC or local facility) currently controls the Class E airspace.

a)   The System must [1112] * include surface area control status information on the airport advisory display.

    1)   The surface area control information must [1113] * be modifiable.

3.1.1.3.6.6   Traffic Display

Traffic display information can come from either Automatic Dependent Surveillance-Broadcast (ADS-B) data or by manually positioning traffic on the airport diagram graphic using the strip-bay information. Traffic information will be displayed graphically on the airport diagram and should contain the Aircraft ID, Aircraft Type and the last update time.

a)   The System must [1114] * provide the capability to manually insert digital flight progress strips from the Airport Advisory Strip-Bay onto the Airport Diagram Graphic.

    1)   The System must [1115] * display the Aircraft ID field.

    2)   The System must [1116] * display the Aircraft Type field.

    3)   The System must [1117] * display the Time of Contact with Pilot field.

    4)   The System must [1118] * provide the capability to manually reposition digital flight progress strips on the traffic display.

b)   The System must [1119] * graphically display aircraft positions using ADS-B data.

    1)   The System must [1120] * display the Aircraft ID field.

    2)   The System must [1121] * display the Aircraft Type field.

c)   The System must [1122] * graphically display vehicle positions using ADS-B data.

    1)   The System must [1123] * display the Vehicle ID field.

    2)   The System must [1124] * display the Vehicle Type field.

3.1.1.3.6.7   Airport Advisory Strip-Bay

The System displays an abbreviated version of the configurable electronic strip-bay on the Airport Advisory Display. The digital flight progress strips displayed in the Airport Advisory Strip-Bay correspond to the airport selected in the Airport Advisory Display. These are a subset of the digital flight progress strips in the main electronic strip-bay and function in the same way.

a)   The System must [1125] * display an Airport Advisory Strip-Bay on the airport advisory display.

    1)   The System must [1126] * provide the capability for up to 30 digital flight progress strips in the Airport Advisory strip-bay.

    2)   The Airport Advisory Strip-Bay must [1127] * contain digital flight progress strips corresponding to the airport contained in the airport advisory display.

    3)   The digital flight progress strips must [1128] * display the Aircraft ID field.

    4)   The digital flight progress strips must [1129] * display the Aircraft Type field.

b)   The System must [1130] * provide the capability to display individual digital flight progress strips in the Airport Advisory Display active flight workspace.

c)   The System must [1131] * provide the capability to store digital flight progress strips in the Airport Advisory Strip-Bay.

d)   The System must [1132] * provide the capability to delete a digital flight progress strip from the Airport Advisory Strip-Bay.

e)   The System must [1133] * provide the capability to manually arrange the digital flight progress strips in the Airport Advisory Strip-Bay.

f) The System must [1134] * provide the capability to automatically save the contents of the Airport Advisory Strip-Bay upon logoff.

g) The System must [1135] * provide the capability to automatically retrieve the information from the Airport Advisory Strip-Bay upon logon.

h) The System must [1136] * provide the capability to display digital flight progress strip information onto the airport diagram graphic.

3.1.1.3.6.7.1 Active Flight Workspace

The active flight workspace allows the user to create digital flight progress strips without using the handwriting input device. It also allows the user to edit existing digital flight progress strips without using the handwriting input device.

a) The System must [1137] * include an active flight workspace on the airport advisory display.

b) The System must [1138] * populate the Active Flight Workspace with the current active digital flight progress strip.

c) The System must [1139] * provide the capability to create digital flight progress strips in the Active Flight Workspace.

d) The System must [1140] * provide the capability to edit digital flight progress strips in the Active Flight Workspace.

3.1.1.3.6.8 Weather Briefing Request

The airport advisory display provides a method to request a weather briefing based on information contained in the active digital flight progress strip.

a) The System must [1141] * provide the capability to request a weather briefing from the airport advisory display.

3.1.1.3.7 Contact List

b) The System must [1142] provide the capability to display Inflight contacts in a Contact List.

    1) The Contact List must [1143] contain IFR aircraft contacts.

    2) The Contact List must [1144] contain DVFR aircraft contacts.

    3) The Contact List must [1145] contain VFR aircraft contacts.

    4) The Contact List must [1146] contain SVFR aircraft contacts.

    5) The Contact List must [1147] contain ICAO IFR contacts.

    6) The Contact List must [1148] contain ICAO VFR contacts.

c) The System must [1149] display on the Contact List the number of Inflight contacts defined in the Contact List Number user parameter.

d) The System must [1150] display on the Contact List the most recent Inflight contacts.

e) The System must [1151] provide the capability to sort by any field.

    1) The default sort for the contact list must [1152] be the time of contact with the most recent contact displayed first.

3.1.1.4   Search and Rescue (SAR)

The System maintains, receives and processes SAR messages and generates an alert upon receipt. SAR messages are placed on the SAR List after receipt and validation. Improperly formatted messages are identified and placed on the SVCB Message List for edit. The user has the capability to respond to SAR data requests with a General Message.

An alert is generated when an Aircraft ID that matches an active SAR message is used in a System transaction or in an Aircraft Movement Message received or transmitted.

The user can perform a SAR Search and generate a SAR Search Report to search history files for a matching Aircraft ID contained in a SAR message.

3.1.1.4.1   SAR Message Receipt

a)   The System must [1153] accept SAR messages from external facilities.

b)   The System must [1154] validate SAR messages upon receipt.

c)   The System must [1155] place improperly formatted SAR messages on the SVCB Message List.

   1)   Improperly formatted SAR messages placed on the SVCB Message List must [1156] indicate the formatting error.

d)   The System must [1157] automatically place the QALQ SAR message on the SAR List upon successful validation of a QALQ SAR message.

e)   The System must [1158] generate a SAR alert upon receipt of a valid QALQ SAR message.

f)   The System must [1159] automatically place the INREQ SAR message on the SAR List upon successful validation of an INREQ SAR message.

g)   The System must [1160] generate a SAR alert upon receipt of a valid INREQ SAR message.

h)   The System must [1161] automatically place the ALNOT SAR message on the SAR List upon successful validation of an ALNOT SAR message.

i)   The System must [1162] generate a SAR alert upon receipt of a valid ALNOT SAR message.

j)   The System must [1163] automatically place the INCERFA SAR message on the SAR List upon successful validation of an INCERFA SAR message.

k)   The System must [1164] generate a SAR alert upon receipt of a valid INCERFA SAR message.

l)   The System must [1165] automatically place the ALERFA SAR message on the SAR List upon successful validation of an ALERFA SAR message.

m)   The System must [1166] generate a SAR alert upon receipt of a valid ALERFA SAR message.

n)   The System must [1167] automatically place the DESTRESFA SAR message on the SAR List upon successful validation of a DESTRESFA SAR message.

o)   The System must [1168] generate a SAR alert upon receipt of a valid DESTRESFA SAR message.

p) The System must [1169] provide the capability to respond to a SAR message with a General Message.

q) The System must [1170] alert the user upon logon when there is a current active SAR.

3.1.1.4.2 SAR Message Transmission

a) The System must [1171] provide the capability to indicate whether or not an acknowledgement is required for each address in the SAR message.

b) The System must [1172] provide the capability to create a QALQ message.

c) The System must [1173] provide the capability to create a QALQ Cancellation message.

d) The System must [1174] provide the capability to create an INREQ message.

e) The System must [1175] provide the capability to create an INREQ Cancellation message.

f) The System must [1176] provide the capability to create an ALNOT message.

g) The System must [1177] provide the capability to create an ALNOT Cancellation message.

h) The System must [1178] provide the capability to create an INCERFA message.

i) The System must [1179] provide the capability to create an INCERFA Cancellation message.

j) The System must [1180] provide the capability to create an ALERFA message.

k) The System must [1181] provide the capability to create an ALERFA Cancellation message.

l) The System must [1182] provide the capability to create a DESTRESFA message.

m) The System must [1183] provide the capability to create a DESTRESFA Cancellation message.

n) The System must [1184] provide the capability to edit a SAR message.

o) The System must [1185] provide the capability to transmit a SAR message.

p) The System must [1186] format SAR messages for transmission.

q) The System must [1187] validate SAR messages for transmission.

r) The System must [1188] add an entry awaiting acknowledgement for each address indicated to the Suspense List after SAR message transmission.

3.1.1.4.3 SAR Message List

a) The System must [1189] retrieve SAR data.

b) The System must [1190] provide a SAR List for the display of Search and Rescue messages.

c) The System must [1191] provide the capability to sort the SAR List based on any field.

   1) The default sort for the SAR Message List must [1192] be Aircraft ID.

   2) The secondary default sort for the SAR Message List must [1193] be the time field in reverse chronological order.

d) The System must [1194] provide the capability to add a SAR List entry.

e) The System must [1195] provide the capability to delete a SAR List entry.

f) The System must [1196] add the entry to the SAR List based upon the current sort when a new entry is received.

3.1.1.4.4 SAR Message Cancellation

a) The System must [1197] automatically place the QALQ Cancellation message on the SAR List upon successful validation of a QALQ Cancellation message.

b) The System must [1198] generate a SAR alert upon receipt of a valid QALQ Cancellation message.

c) The System must [1199] automatically place the INREQ Cancellation message on the SAR List upon successful validation of an INREQ Cancellation message.

d) The System must [1200] generate a SAR alert upon receipt of a valid INREQ Cancellation message.

e) The System must [1201] automatically place the ALNOT Cancellation message on the SAR List upon successful validation of an ALNOT Cancellation message.

f) The System must [1202] generate a SAR alert upon receipt of a valid ALNOT Cancellation message.

g) The System must [1203] automatically place the INCERFA Cancellation message on the SAR List upon successful validation of an INCERFA Cancellation message.

h) The System must [1204] generate a SAR alert upon receipt of a valid INCERFA Cancellation message.

i) The System must [1205] automatically place the ALERFA Cancellation message on the SAR List upon successful validation of an ALERFA Cancellation message.

j) The System must [1206] generate a SAR alert upon receipt of a valid ALERFA Cancellation message.

k) The System must [1207] automatically place the DESTRESFA Cancellation message on the SAR List upon successful validation of a DESTRESFA Cancellation message.

l) The System must [1208] generate a SAR alert upon receipt of a valid DESTRESFA Cancellation message.

3.1.1.4.5 SAR Search

a) The System must [1209] search flight movement history for the Aircraft ID contained in a SAR message.

1) The System must [1210] search for the given Aircraft ID with an "L" inserted at the beginning if the Aircraft ID does not start with the letter "L".

2) The System must [1211] search for the given Aircraft ID with a "T" inserted at the beginning if the Aircraft ID does not start with the letter "T".

3) The System must [1212] search for the given Aircraft ID minus the first character if the first character is the letter "L".

4) The System must [1213] search for the given Aircraft ID minus the first character if the first character is the letter "T".

b) The System must [1214] provide the capability to create a SAR Search Report containing System transactions where the Aircraft ID matches that in a SAR message.

c) The System must [1215] provide the capability to create a SAR Search Report containing the Automatic Flight Plan Tracking history where the Aircraft ID matches that in a SAR message.

d) The System must [1216] provide the capability to create a SAR Search Report containing received Aircraft Movement Messages where the Aircraft ID matches that in a SAR message.

e) The System must [1217] provide the capability to create a SAR Search Report containing transmitted Aircraft Movement Messages where the Aircraft ID matches that in a SAR message.

f) The System must [1218] provide the capability to print a SAR Search Report.

g) The System must [1219] provide the capability to save a SAR Search Report.

h) The System must [1220] provide a timestamp for each of the historical items contained within the SAR Search Report.

   1) The data displayed in the SAR Search Report must [1221] be displayed in reverse chronological order.

3.1.1.4.6 Automatic Flight Plan Tracking

The System provides the capability to track flight plans using either Automated Flight Following (AFF) or ADS-B data. The System uses this data to perform Automatic Flight Plan Tracking (AFPT) and monitors the data after a flight plan has been activated. Monitoring continues until the flight plan is closed or cancelled.

The System graphically depicts the location of the aircraft using this data. If the data feed is lost for an aircraft, the data indicates that the aircraft is no longer moving forward, or the data feed indicates distress, the System generates an alert and the display is updated to indicate the status. When the data feed returns or the aircraft begins forward movement again, the alarm is halted and the status returns to normal.

AFPT is enabled for an aircraft when the flight plan is filed using a field in the flight plan mask. AFPT may also be disabled for a specific aircraft in case of faulty equipment or other malfunction.

AFPT data is displayed graphically and can be filtered by Aircraft ID or by facility with SAR responsibility. The System may also display all aircraft currently registered with AFF or ADS-B, regardless of whether a corresponding flight plan currently exists in the System.

a) The System must [1222] * perform Automatic Flight Plan Tracking (AFPT).

   1) AFPT must [1223] * utilize AFF and ADS-B data.

   2) The System must [1224] * provide the option to enable or disable AFPT per Aircraft ID.

   3) The System must [1225] * monitor the data feeds for AFPT enabled active flight plans.

      a. The System must [1226] * generate an alert when no AFPT data has been received within the AFPT Communication time system parameter.

      b.   The System must [1227] * generate an alert when the AFPT data indicates the aircraft has stopped forward movement within the AFPT Stopped Movement system parameter.

      c.   The System must [1228] * generate an alert when the AFPT data indicates distress.

  b)   The System must [1229] * overlay AFPT data onto any earth locatable graphic map

    1)   The AFPT overlay must [1230] * indicate the state of the AFPT data feeds per Aircraft ID.

    2)   The AFPT overlay must [1231] * provide the capability to display AFPT history.

    3)   The System must [1232] * provide the capability to filter the AFPT data overlay.

      a.   The AFPT data overlay must [1233] * display all AFPT enabled active flight plans by default.

      b.   The System must [1234] * provide filtering by Aircraft ID.

        1.   The filter must [1235] * provide the capability to enter 1-500 Aircraft IDs.

      c.   The System must [1236] * provide filtering by SAR responsibility.

      d.   The System must [1237] * provide filtering by all AFF and ADS-B registrations.

3.1.1.5 Data Management

The System processes aeronautical and weather dynamic data, maintains a database of prestored flight plans, maintains alert queues for improperly formatted messages, edits of flight data, updates flight plan information, updates LE Lists, and maintains the NOTAM database.

  a)   The System must [1238] maintain global databases accessible by all facilities.

  b)   The System must [1239] provide the capability to filter data contained in the global databases by facility.

3.1.1.5.1 Aeronautical Data

The System processes aeronautical data. Processing includes storing, updating, retrieving and deleting aeronautical data. Aeronautical data is updated automatically as new versions arrive. Some aeronautical data may also be transmitted from the System.

  a)   The System must [1240] maintain an Aeronautical Information Database.

  b)   The System must [1241] store aeronautical data.

  c)   The System must [1242] update aeronautical data as new products arrive.

  d)   The System must [1243] retrieve aeronautical data.

  e)   The System must [1244] delete aeronautical data.

3.1.1.5.2 Weather Data

The System processes weather data. Processing includes receiving, storing, updating, and deleting weather data. Weather data is updated automatically as new versions arrive. Some weather data may also be transmitted from the System.

  a)   The System must [1245] maintain a database of alphanumeric weather data.

b) The System must [1246] maintain a database of graphical weather data.

c) The System must [1247] store valid weather data.

d) The System must [1248] update weather data as new products arrive.

e) The System must [1249] retrieve weather data.

f) The System must [1250] delete weather data.

3.1.1.5.3 Static Data

The System maintains a database of static data including published information, reference information, airway information, information about fixes and airport masters. This information is updated during 56-day database updates and may be corrected between updates by the system administrator.

a) The System must [1251] maintain a database of static reference data as required by FAA Order 7210.3.

b) All static reference data must [1252] be obtained from an FAA-approved source.

c) The System must [1253] provide the capability for the system administrator to modify static data between 56-day updates.

3.1.1.5.4 Pre-Stored Flight Plan Database

a) The System must [1254] maintain a database of prestored flight plans.

b) The prestored flight plans must [1255] be maintained for each local facility.

3.1.1.5.5 Alert Queues

The System provides alerts for flight and weather messages that are received in an improper format. The System provides the capability to edit and store data from the SVCB Message List and SVCA Message List.

3.1.1.5.5.1   SVCB Message List

a) The System must [1256] add SVCB messages that are improperly formatted to the SVCB Message List.

b) The System must [1257] generate an alarm when a new entry is added to the SVCB Message List.

c) The System must [1258] provide the capability to sort the SVCB Message List by any field.

　　1) The default sort for the SVCB Message List display must [1259] be the time of receipt.

　　2) The System must [1260] add the entry to the SVCB Message List based upon the current sort upon receipt of a new entry.

d) The System must [1261] provide the capability to individually display an expanded message in its entirety from the SVCB Message List.

　　1) The System must [1262] provide the option to filter control characters when displaying an expanded message from the SVCB Message List.

e)   The System must [1263] provide the capability to edit improperly formatted messages on the SVCB Message List.

f)   The System must [1264] provide the capability to store edited messages from the SVCB Message List.

g)   The System must [1265] provide the capability to delete improperly formatted messages from the SVCB Message List.

h)   The System must [1266] provide the capability to individually print an expanded message in its entirety from the SVCB Message List.

3.1.1.5.5.2   SVCA Message List

a)   The System must [1267] add SVCA messages that are improperly formatted to the SVCA Message List.

b)   The System must [1268] generate an alarm when a new entry is added to the SVCA Message List.

c)   The System must [1269] provide the capability to sort the SVCA Message List by any field.

1)   The default sort for the SVCA Message List display must [1270] be the time of receipt.

2)   The System must [1271] add the entry to the SVCA Message List based upon the current sort when a new entry is received.

d)   The System must [1272] provide the capability to individually display an expanded message in its entirety from the SVCA Message List.

1)   The System must [1273] provide the option to filter control characters when displaying an expanded message from the SVCA Message List.

e)   The System must [1274] provide the capability to edit improperly formatted weather messages on the SVCA Message List.

f)   The System must [1275] provide the capability to store edited weather messages from the SVCA Message List.

g)   The System must [1276] provide the capability to delete improperly formatted weather messages from the SVCA Message List.

h)   The System must [1277] provide the capability to individually print an expanded message in its entirety from the SVCA Message List.

3.1.1.5.6 WMO Header Database

a)   The System must [1278] provide the capability to maintain a WMO Header Database.

b)   The System must [1279] provide the capability to store WMO Header data in the WMO Header Database.

c)   The System must [1280] provide the capability to retrieve WMO Header data from the WMO Header Database.

d)   The System must [1281] provide the capability to edit WMO Header data in the WMO Header Database.

e)   The System must [1282] provide the capability to delete WMO Header data from the WMO Header Database.

3.1.1.5.7 Flight Plan Database

a)   The System must [1283] provide a Proposed List containing flight plan data.

b)   The System must [1284] provide a Suspense List containing flight plan data.

c)   The System must [1285] provide an Inbound List containing flight plan data.

d)   The System must [1286] provide an Inactive List containing flight plan data.

e)   The System must [1287] provide the capability to retrieve flight plan data.

f)   The System must [1288] provide the capability to retrieve flight plans by any flight plan field.

g)   The System must [1289] provide the capability to store flight plan data.

h)   The System must [1290] provide the capability to edit flight plan data.

i)   The System must [1291] provide the capability to delete flight plan data.

j)   The System must [1292] provide the capability to retransmit flight plan data upon completion of editing a flight plan on the Suspense List.

k)   The System must [1293] maintain an active record of all flight data transactions for a number of days specified in the History Data Retention system parameter.

l)   The System must [1294] update flight plan information received from external sources.

m)   The System must [1295] update flight plan information received from internal sources.

3.1.1.5.8 Flight Related Updates

The System will monitor flight related updates for filed flight plans. The System will notify the user when an update occurs and will provide the corresponding data. The user can then relay this information to the pilot.

If the aircraft is equipped with a data-link capable system, the flight related update will be transmitted to the aircraft automatically.

a)   The System must [1296] monitor relevant flight related changes for the flight plan when a flight plan is filed.

b)   The System must [1297] monitor major changes in adverse conditions along the route of flight for flight plans filed.

c)   The System must [1298] continue to monitor changes until the flight plan is closed or cancelled.

d)   The System must [1299] indicate to the user that a flight related update has occurred for the corresponding flight plan when a flight related change is detected.

e)   The System must [1300] * perform flight related update processing for aircraft equipped with data-link capable systems.

1)   The System must [1301] * automatically transmit flight related updates to data-link capable aircraft.

3.1.1.5.9 Law Enforcement (LE) Database
a)   The System must [1302] maintain an LE database.
b)   The System must [1303] provide the capability to store LE messages in the LE Database.
c)   The System must [1304] provide the capability to retrieve LE messages from the LE Database.
d)   The System must [1305] provide the capability to delete LE messages from the LE Database.

3.1.1.5.10 NOTAM Database
a)   The System must [1306] maintain a NOTAM database.

3.1.1.5.11 Internal Messaging
Internal messages are defined as user transactions between users, workstations, positions or System facilities. These transactions are history recorded and time stamped. They can be reviewed as part of an event reconstruction report.

a)   The System must [1307] provide internal messaging.
   1)   The System must [1308] provide the capability to send internal messages to individual users.
   2)   The System must [1309] provide the capability to send internal messages to configurable groups of users.
   3)   The System must [1310] provide the capability to send internal messages to configurable functional positions.
   4)   The System must [1311] provide the capability to send internal messages to System facilities.
b)   The System must [1312] history record internal messages.
c)   The System must [1313] provide internal message history as part of an event reconstruction report.

3.1.1.5.12 Email
a)   The System must [1314] provide the capability to transmit data using email provided by a Qualified Internet Communication Provider (QICP).

3.1.1.5.13 Master Contact Database
Functions requiring contact information may access this database to obtain frequently used contact information such as telephone numbers, addresses, and email addresses. The Master Flight Plan Database uses the information stored in the Master Contact Database to obtain data for aircraft owners. Centrally storing the contact information eliminates having to update the data multiple times.

a)   The System must [1315] maintain a Master Contact Database.
b)   The System must [1316] provide the capability to store contact information in the Master Contact Database.

c)   The System must [1317] provide the capability to retrieve contact information from the Master Contact Database

d)   The System must [1318] provide the capability to edit contact information from the Master Contact Database.

e)   The System must [1319] provide the capability to delete contact information from the Master Contact Database.

f)   The Master Contact Database must [1320] include a Contact Information field.

    1)   Contact Information must [1321] include a Name field.

    2)   Contact Information must [1322] include a Company Name field.

    3)   Contact Information must [1323] include a Physical Address field.

        a.   Physical Address must [1324] include a Street field.

        b.   Physical Address must [1325] include a City field.

        c.   Physical Address must [1326] include a State field.

        d.   Physical Address must [1327] include a Zip Code field.

    4)   Contact Information must [1328] include a Mailing Address field.

        a.   Mailing Address must [1329] include a Street/PO Box field.

        b.   Mailing Address must [1330] include a City field.

        c.   Mailing Address must [1331] include a State field.

        d.   Mailing Address must [1332] include a Zip Code field.

    5)   Contact Information must [1333] include a Phone Number field containing up to ten phone numbers.

    6)   Contact Information must [1334] include a Facsimile Number field.

    7)   Contact Information must [1335] include an Email Address field.

    8)   Contact Information must [1336] include an Airport Location ID field.

    9)   Contact Information must [1337] include a Contact Category field containing up to 5 categories.

    10) Contact Information must [1338] include a Radio Call Sign field.

    11) Contact Information must [1339] include a Notes field.

    12) Contact Information must [1340] include a Last Update field.

        a.   The Last Update must [1341] include a Time field.

        b.   The Last Update must [1342] include a User Id field.

3.1.1.5.14 Integrated Facsimile Server

a)   The System must [1343] provide an integrated facsimile (fax) server.

b)   The System must [1344] provide the capability to transmit documents via an integrated fax server.

    1)   The System must [1345] provide the capability to transmit documents from standard file formats.

c)   The System must [1346] provide the capability to receive documents via an integrated fax server.

1) The System must [1347] notify the user when documents are received via an integrated fax server.

2) The System must [1348] provide the capability to store documents received in standard file formats.

d) The System must [1349] provide the capability to retrieve documents received via an integrated fax server.

3.1.1.5.15 Integrated Scanner

a) The System must [1350] provide an integrated scanner.

b) The System must [1351] provide the capability to scan documents into standard file formats.

c) The System scanner must [1352] be a flatbed scanner type.

d) The System scanner must [1353] be capable of scanning in both B/W and color.

e) The System scanner must [1354] be capable of up to 4800 dpi resolution.

f) The System scanner must [1355] be capable of 256 levels of grayscale.

g) The System scanner must [1356] be capable of a maximum scan size of 11 x 17 inches.

h) The System scanner must [1357] be capable of OCR scanning a full page of text in less than 33 seconds.

3.1.1.5.16 Integrated Printer

a) The System must [1358] provide an integrated printer.

b) The System must [1359] provide the capability to print documents and graphics.

3.1.1.5.16.1   Monochromatic Laser Printer

The System laser printer provides letter-quality text at six pages per minute (ppm) and graphics at a minimum print resolution 600 x 600 dpi in both the portrait and landscape mode.

a) The System monochromatic laser printer must [1360] be capable of printing letter-quality text at a minimum of six ppm.

b) The System laser printer must [1361] be capable of printing text at a minimum print resolution of 600 dots per inch (dpi) horizontally and 600 dpi vertically.

c) The System laser printer must [1362] be capable of printing graphics at a minimum print resolution of 600 dots per inch (dpi) horizontally and 600 dpi vertically.

d) The System laser printer must [1363] be capable of printing text in the landscape mode.

e) The System laser printer must [1364] be capable of printing text in the portrait mode.

f) The System laser printer must [1365] be capable of printing graphics in the landscape mode.

g) The System laser printer must [1366] be capable of printing graphics in the portrait mode.

h) The System laser printer must [1367] use 8.5 by 11-inch paper.

3.1.1.5.16.2 Color Printer

a) The System color printer must [2976] provide color graphics and black text.

b) The System color printer must [1368] be capable of producing color graphics and black text.

c) The System color printer must [1369] be capable of printing black letter-quality text at a minimum of six ppm.

d) The System color printer must [1370] be capable of printing text at a minimum print resolution of 600 dpi horizontally and 600 dpi vertically.

e) The System color printer must [1371] be capable of printing color graphics at a minimum of four ppm.

f) The System color printer must [1372] be capable of printing color graphics at a minimum print resolution of 600 dpi horizontally and 300 dpi vertically.

g) The System color printer must [1373] be capable of producing a 7.5 by 10-inch hardcopy output of an image product on 8.5 by 11-inch paper.

h) The System color printer must [1374] use paper that can be written on with a standard ink pen, felt tip pen and pencil.

i) The System color printer must [1375] be capable of printing text in the landscape mode.

j) The System color printer must [1376] be capable of printing text in the portrait mode.

k) The System color printer must [1377] be capable of printing graphics in the landscape mode.

l) The System color printer must [1378] be capable of printing graphics in the portrait mode.

3.1.1.5.17 Secondary Storage Device

a) The System must [1379] be capable of storing data on a flash memory data storage device integrated with a universal serial bus (USB) interface.

3.1.1.5.18 Standard COTS Application Software

a) The System must [1380] provide standard COTS application software.

b) The System must [1381] provide Microsoft Office.

c) The System must [1382] provide Adobe Acrobat Professional.

3.1.1.5.19 General Message Database

a) The System must [1383] maintain a General Message Database.

b) The System must [1384] provide the capability to create General Messages.

c) The System must [1385] provide the capability to store General Messages in the General Message Database.

d) The System must [1386] provide the capability to retrieve General Messages from the General Message Database.

e) The System must [1387] provide the capability to transmit General Messages from the General Message Database.

f)   The System must [1388] provide the capability to edit General Messages in the General Message Database.

g)   The System must [1389] provide the capability to delete General Messages from the General Message Database.

3.1.1.5.20 Master Flight Plan Database

The System provides a Master Flight Plan (MFP) Database. This database contains information pertinent to an aircraft and is used for both automatically filling common flight plan fields and for search and rescue procedures.

The data is entered into the System either by the specialist when a pilot provides the data (either in written form, via email, fax, or phone) or by a web portal user entering their own data. The data may be updated manually when changes occur.

When the data is entered by a specialist, the pilot receives a notification email if an email address has been provided.

The MFP data is searchable by various fields and also provides a link to the corresponding information in the FAA National Aircraft Registry online.

a)   The System must [1390] maintain a Master Flight Plan (MFP) Database.

b)   The System must [1391] provide the capability to store MFP data in the Master Flight Plan Database.

1)   The MFP data must [1392] include an Aircraft ID field.

2)   The MFP data must [1393] include an Aircraft Type/Equipment Suffix field.

3)   The MFP data must [1394] include a True Airspeed field.

4)   The MFP data must [1395] include a Color of Aircraft field.

5)   The MFP data must [1396] include a Hexadecimal Code field.

6)   The MFP data must [1397] include an AFF Equipped field.

7)   The MFP data must [1398] include a Remarks field.

a.   Remarks must [1399] include a Radio Information field.

b.   Remarks must [1400] include a Navigational Equipment Information field.

c.   Remarks must [1401] include a Ski Information field.

d.   Remarks must [1402] include a Float Information field.

e.   Remarks must [1403] include an Other Pertinent Information field.

8)   The MFP data must [1404] include an Owner/Operator Information field.

a.   Owner/Operator Information must [1405] include a Name field.

b.   Owner/Operator Information must [1406] include a Company Name field.

c.   Owner/Operator Information must [1407] include a Physical Address field.

1.   Physical Address must [1408] include a Street field.

2.   Physical Address must [1409] include a City field.

   3. Physical Address must [1410] include a State field.

   4. Physical Address must [1411] include a Zip Code field.

  d. Owner/Operator Information must [1412] include a Mailing Address field.

   1. Mailing Address must [1413] include a Street/PO Box field.

   2. Mailing Address must [1414] include a City field.

   3. Mailing Address must [1415] include a State field.

   4. Mailing Address must [1416] include a Zip Code field.

  e. Owner/Operator Information must [1417] include a Phone Number field containing up to ten phone numbers.

  f. Owner/Operator Information must [1418] include a Facsimile Number field.

  g. Owner/Operator Information must [1419] include an Email Address field.

 9) The MFP data must [1420] include an Aircraft Home Base field.

 10) The MFP data must [1421] include a 24 Hour Coordination Contact Information field.

  a. Coordination Contact Information must [1422] include a Name field.

  b. Coordination Contact Information must [1423] include a Phone Number field.

 11) The MFP data must [1424] include an Optional Information field.

  a. Optional Information must [1425] include a Service Ceiling field.

  b. Optional Information must [1426] include a Maximum Fuel Capacity field.

 12) The MFP data must [1427] include a Last Update field.

  a. The Last Update must [1428] include a Time field.

  b. The Last Update must [1429] include a User Id field.

  c. The Last Update must [1430] include a Pilot Notification field.

 13) The MFP data must [1431] include additional fields only viewable by a specialist.

  a. The additional fields must [1432] include a 3 alphabetic character Company ID Field.

  b. The additional fields must [1433] include a Round-Robin field.

c) The System must [1434] automatically send a confirmation email when a Master Flight Plan Database entry is stored if an email address is contained in the Owner/Operator Information field.

 1) The System must [1435] automatically insert the email address into the Pilot Notification field.

d) The System must [1436] provide the capability to retrieve MFP data from the Master Flight Plan Database.

       1)   The System must [1437] retrieve MFP data by Aircraft ID using a wildcard search.

       2)   The System must [1438] retrieve MFP data by any field using a wildcard search.

e)   The System must [1439] provide the capability to edit MFP data in the Master Flight Plan Database.

f)   The System must [1440] provide the capability to delete MFP data from the Master Flight Plan Database.

g)   The System must [1441] provide the capability to retrieve from the National Aircraft Registry.

3.1.1.5.21 Inflight Contact Database

a)   The System must [1442] maintain an Inflight Contact Database.

b)   The System must [1443] provide the capability to store inflight contact data in the Inflight Contact Database.

c)   The System must [1444] provide the capability to retrieve inflight contact data from the Inflight Contact Database.

d)   The System must [1445] provide the capability to edit inflight contact data in the Inflight Contact Database.

e)   The System must [1446] provide the capability to delete inflight contact data from the Inflight Contact Database.

f)   The System must [1447] store inflight contact data for a number of days specified in the History Data Retention system parameter.

3.1.1.5.22 Traffic Count Database

a)   The System must [1448] maintain a Traffic Count Database.

b)   The System must [1449] provide the capability to store traffic count data in the Traffic Count Database.

c)   The System must [1450] provide the capability to retrieve traffic count data from the Traffic Count Database.

d)   The System must [1451] provide users with administrative privileges to edit traffic count data in the Traffic Count Database.

e)   The System must [1452] provide users with administrative privileges to delete traffic count data from the Traffic Count Database.

3.1.1.5.23 Comment Database

a)   The System must [1453] maintain a Comment Database.

3.1.1.5.24 Operational Performance Metric Database

a)   The System must [1454] maintain an Operational Performance Metric Database.

3.1.1.5.25 View Sequence Database

The System provides the capability to create, store, retrieve, edit, delete, and execute view sequence definitions. View sequence definitions are a user-defined set of commands that allow for the quick retrieval of data.

a)   The System must [1455] maintain a View Sequence Database.

b)   The System must [1456] provide the capability to create a view sequence definition.

c)   The System must [1457] provide the capability to store view sequence definitions in the View Sequence Database.

d)   The System must [1458] provide the capability to retrieve view sequence definitions from the View Sequence Database.

e)   The System must [1459] provide the capability to edit view sequence definitions in the View Sequence Database.

    1)   The System must [1460] record the user id of the last view sequence definition edit.

    2)   The System must [1461] record the DTG of the last view sequence definition edit.

f)   The System must [1462] provide the capability to delete view sequence definitions from the View Sequence Database.

    1)   The System must [1463] permit deletion of a view sequence definition while not in edit mode.

g)   The System must [1464] provide the capability to execute a view sequence definition.

    1)   A view sequence definition must [1465] be capable of displaying static text when executed.

    2)   A view sequence definition must [1466] be capable of displaying dynamic weather data when executed.

    3)   A view sequence definition must [1467] be capable of displaying dynamic aeronautical data when executed.

    4)   A view sequence definition must [1468] be capable of displaying static graphics when executed.

    5)   A view sequence definition must [1469] be capable of displaying dynamic weather graphics when executed.

    6)   A view sequence definition must [1470] be capable of containing hypertext links.

    7)   A view sequence definition must [1471] display the user id and DTG of the last view sequence definition edit.

    8)   A view sequence definition must [1472] be capable of refreshing active data without re-executing the view sequence definition.

h)   The System must [1473] validate existing view sequence definitions during database updates.

i)   The System must [1474] provide the capability for multiple users to execute the same view sequence simultaneously.

j)   The System must [1475] notify the user when opening a view sequence for edit, if it is currently being edited by another user.

    1)   The System must [1476] indicate the user currently editing the view sequence.

    2)   The System must [1477] provide the option to open the view sequence with read-only access.

3.1.1.5.26 Aircraft Hexadecimal Database

The Aircraft Hexadecimal Database provides information for aircraft that have ADS-B equipment. This information contains the Aircraft ID and corresponding discrete hexadecimal code for the ADS-B equipment.

a)   The System must [1478] * maintain an Aircraft Hexadecimal Database for ADS-B equipped aircraft.

b)   The Aircraft Hexadecimal Database must [1479] * include Aircraft Hexadecimal Information.

    1)   The Aircraft Hexadecimal Information must [1480] * include an Aircraft ID field.

    2)   The Aircraft Hexadecimal Information must [1481] * include a Discrete Hexadecimal Code field.

c)   The System must [1482] * provide the capability to store Aircraft Hexadecimal Information in the Aircraft Hexadecimal Database.

d)   The System must [1483] * provide the capability to retrieve Aircraft Hexadecimal Information from the Aircraft Hexadecimal Database.

e)   The System must [1484] * provide the capability to edit Aircraft Hexadecimal Information in the Aircraft Hexadecimal Database.

f)   The System must [1485] * provide the capability to delete Aircraft Hexadecimal Information from the Aircraft Hexadecimal Database.

3.1.1.5.27 Automated Flight Plan Tracking Database

The Automated Flight Plan Tracking (AFPT) Database contains data provided by Automated Flight Following (AFF) or ADS-B data feeds. This data is used to monitor aircraft locations for graphical depiction and search and rescue procedures.

a)   The System must [1486] * maintain an Automated Flight Plan Tracking (AFPT) Database.

b)   The System must [1487] * store AFF data in the AFPT Database.

    1)   The AFF data must [1488] * include an Aircraft ID field.

    2)   The AFF data must [1489] * include a Position field (lat/lon).

    3)   The AFF data must [1490] * include an Airspeed field.

    4)   The AFF data must [1491] * include a Heading field.

    5)   The AFF data must [1492] * include an Altitude field.

    6)   The AFF data must [1493] * include an Equipment Serial Number (ESN) field.

    7)   The AFF data must [1494] * include a Time of Last Update field.

c) The System must [1495] * store ADS-B data in the AFPT Database.

    1) The ADS-B data must [1496] * include an Aircraft ID field.

    2) The ADS-B data must [1497] * include a Position field (lat/lon).

    3) The ADS-B data must [1498] * include an Airspeed field.

    4) The ADS-B data must [1499] * include a Heading field.

    5) The ADS-B data must [1500] * include an Altitude field.

    6) The ADS-B data must [1501] * include a Discrete Hexadecimal Code field.

    7) The ADS-B data must [1502] * include a Time of Last Update field.

3.1.1.5.28 Alerts for Delayed Products

a) The System must [3062] alert the user when weather products are delayed or are no longer valid.

b) The System must [1503] maintain alerts for delayed A/N products.

c) The System must [1504] generate an alert when a replacement A/N product has not been received by the product's scheduled time plus the Delayed A/N Product time system parameter.

d) The System must [1505] generate an alert for each A/N product that has expired without a replacement product received.

e) The System must [1506] maintain alerts for delayed weather graphics.

f) The System must [1507] generate an alert when a replacement graphical weather product has not been received by the product's scheduled time plus the Delayed Weather Graphic time system parameter.

g) The System must [1508] generate an alert for each graphical weather product that has expired without a replacement product received.

3.1.1.5.29 Message Transmission Queues

a) The System must [1509] monitor message transmission queue(s).

b) The System must [1510] generate an alert for messages in queue for more than the number of minutes specified in the Message Transmit Queue time system parameter.

    1) The System must [1511] provide the capability to configure the number of minutes before an alert is generated by message type.

3.1.1.5.30 Real-time System Updates

a) The System must [1512] perform real-time database updates.

b) The System must [1513] perform real-time software releases.

3.1.1.5.31 Configurable Parameters

Table 3-3 Configurable Parameters

Parameter Name	Units	Minimum	Maximum	Step	Default
Acknowledgement	Minutes	1	120	1	10

Parameter Name	Units	Minimum	Maximum	Step	Default
AFPT Communication	Seconds	1	3600	1	60
AFPT Stopped Movement	NM	.01	10	.01	1
Area Radius	NM	5	300	5	25
ATCSCC Area	ARTCC ID	1	26	1	1
Cancelled NOTAM Retention	Days	15	60	1	15
Contact List Number	Number	10	100	5	40
Delayed A/N Product	Minutes	1	120	1	15
Delayed Graphic Product	Minutes	1	120	1	15
Flight Service Station Transmit	Minutes	0	480	1	60
History Data Retention	Days	15	60	1	15
I-List Strip	Minutes	0	480	1	60
IFR Transmit	Minutes	0	480	1	120
Inactive Account Old	Days	30	999	30	999
Inactive Flight Plan Drop	Minutes	0	600	1	120
Inactive Session Lock	Minutes	1	999	1	999
Inactive Session Termination	Minutes	1	999	1	999
Inbound Overdue	Minutes	1	240	1	30
Login Attempts	Number	1	9	1	3
Message Transmit Queue	Minutes	1	60	1	5
NOTAM History Data Retention	Days	15	60	1	15

Parameter Name	Units	Minimum	Maximum	Step	Default
Number of Days Old	Days	0	999	1	30
P-List Strip	Minutes	0	480	1	60
PIREP Time Interval	Minutes	60	180	5	180
Prestored	Minutes	5	480	1	60
Proposed Flight Plan Drop Interval	Minutes	0	600	1	120
Route Corridor Width	NM	10	100	5	50
SPECI Time Interval	Minutes	60	180	5	180
Winds Aloft Corridor Width	NM	50	300	25	200
Winds Aloft Radius	NM	50	300	25	75
Winds Aloft Vertical Range	Thousands of feet	0	6	1	3

3.1.1.5.31.1   System Parameters

a)   The System must [1514] maintain a database of System Configurable Parameters.

1)   The System Configurable Parameters must [1515] include an IFR Transmit time.

2)   The System Configurable Parameters must [1516] include a Flight Service Station Transmit time.

3)   The System Configurable Parameters must [1517] include a History Data Retention time.

4)   The System Configurable Parameters must [1518] include a Prestored time.

5)   The System Configurable Parameters must [1519] include a Proposed Flight Plan Drop Interval time.

6)   The System Configurable Parameters must [1520] include an Acknowledgement time.

7)   The System Configurable Parameters must [1521] include an Inbound Overdue time.

8)   The System Configurable Parameters must [1522] include an AFPT Communication time.

9) The System Configurable Parameters must [1523] include an AFPT Stopped Movement.

10) The System Configurable Parameters must [1524] include an Inactive Flight Plan Drop time.

11) The System Configurable Parameters must [1525] include a Delayed A/N Product time for each A/N weather product.

12) The System Configurable Parameters must [1526] include a Delayed Weather Graphic time for each weather graphic.

13) The System Configurable Parameters must [1527] include a Message Transmit Queue time for each message type.

14) The System Configurable Parameters must [1528] include a Cancelled NOTAM Retention time.

15) The System Configurable Parameters must [1529] include a NOTAM History Data Retention time.

16) The System Configurable Parameters must [1530] include a Number of Days Old.

17) The System Configurable Parameters must [1531] include an Inactive Account Old.

18) The System Configurable Parameters must [1532] include an Login Attempts.

19) The System Configurable Parameters must [1533] include an Inactive Session Termination.

20) The System Configurable Parameters must [1534] include an Inactive Session Lock.

b) The System must [1535] provide the capability to display System Configurable Parameters.

c) The System must [1536] provide the capability to modify the values of System Configurable Parameters.

d) The System must [1537] define valid ranges for each System Configurable Parameter value.

3.1.1.5.31.2 Facility Parameters

a) The System must [1538] maintain a database of Facility Configurable Parameters.

1) The Facility Configurable Parameters must [1539] include an ATCSCC Area.

2) The Facility Configurable Parameters must [1540] include a P-List Strip time.

3) The Facility Configurable Parameters must [1541] include an I-List Strip time.

b) The System must [1542] provide the capability to display Facility Configurable Parameters.

c) The System must [1543] provide the capability to modify the values of Facility Configurable Parameters.

d) The System must [1544] define valid ranges for each Facility Configurable Parameter value.

3.1.1.5.31.3   User Parameters

a)   The System must [1545] maintain a database of User Configurable Parameters.

  1)   The User Configurable Parameters must [1546] include an Area Radius.

  2)   The User Configurable Parameters must [1547] include a Winds Aloft Radius.

  3)   The User Configurable Parameters must [1548] include a Route Corridor Width.

  4)   The User Configurable Parameters must [1549] include a Winds Aloft Corridor Width.

  5)   The User Configurable Parameters must [1550] include a SPECI Time Interval.

  6)   The User Configurable Parameters must [1551] include a PIREP Time Interval.

  7)   The User Configurable Parameters must [1552] include a Contact List Number.

b)   The System must [1553] provide the capability to display User Configurable Parameters.

c)   The System must [1554] provide the capability to modify the values of User Configurable Parameters.

d)   The System must [1555] define valid ranges for each User Configurable Parameter value.

3.1.1.5.32 Online Help

a)   The System must [1556] provide online Help.

  1)   The System must [1557] provide searchable, online access to System user documents.

  2)   The System must [1558] provide searchable, online access to FAA documents.

  3)   The System must [1559] provide online access to System specific format/syntax information.

b)   The System must [1560] provide 3-character to 4-character LOCID conversion.

c)   The System must [1561] provide 4-character to 3-character LOCID conversion.

d)   The System must [1562] provide 3-character/4-character LOCID encode and decode.

e)   The System must [1563] provide the capability to decode LOCID data.

f)   The System must [1564] provide the capability to decode airway data.

g)   The System must [1565] provide the capability to decode SUA data.

h)   The System must [1566] provide the capability to decode abbreviations.

i)   The System must [1567] provide the capability to decode contractions.

j)   The System must [1568] provide the capability to decode local contractions.

k)   The System must [1569] provide the capability to decode aircraft types.

l)   The System must [1570] provide the capability to decode acronyms.

m)   The System must [1571] provide the capability to encode data.

n)   The System must [1572] provide current Alaskan Pilot Bulletins.

3.1.1.6 Weather Observation Processing

The System provides the capability for the user to enter, edit and transmit weather observation products including METARs, SPECIs, PIREPs and urgent PIREPS.

3.1.1.6.1 Weather Observations Processing

The System provides for the entering, editing, and transmitting of METARs and Special METARs (SPECIs). The System, as a minimum, provides the functional capability to include the various data for weather observation processing.

The System provides the user with the capability to specify whether a METAR is to be transmitted immediately or whether it is to be held and transmitted with other METARs, as a group, on an hourly basis.

a) The System must [1573] provide the capability to enter multiple weather observations.

b) The System must [1574] provide the capability to enter multiple correction weather observation messages.

c) The System must [1575] provide the capability to edit multiple weather observations.

d) The System must [1576] provide the capability to transmit multiple weather observations.

e) The weather observations must [1577] include METARs.

f) The weather observations must [1578] include SPECIs.

g) The System must [1579] format weather observation messages for transmission IAW WMO-386.

   1) The System must [1580] provide the capability to include the Station ID for the origin of the observation data.

   2) The System must [1581] provide the capability to include the Observation Time data.

   3) The System must [1582] provide the capability to include the Report type (METAR or Special).

   4) The System must [1583] provide the capability to include Wind (direction and speed) data.

   5) The System must [1584] provide the capability to include Visibility data.

   6) The System must [1585] provide the capability to include Weather (present weather) data.

   7) The System must [1586] provide the capability to include Sky Condition data.

   8) The System must [1587] provide the capability to include Temperature/Dew Point data.

   9) The System must [1588] provide the capability to include Altimeter Setting data.

   10) The System must [1589] provide the capability to include Runway Visual Range data.

   11) The System must [1590] provide the capability to include Remarks data.

h) The System must [1591] provide the capability to queue user-designated weather observations for hourly transmission.

i) The System must [1592] provide the capability to immediately transmit weather observations.

j) The System must [1593] validate weather observation messages for transmission IAW WMO-386.

    1) The System must [1594] only transmit a weather observation message if no errors are found.

    2) The System must [1595] automatically perform syntax error checking on the weather observation entries.

    3) The System must [1596] display all error messages upon request for transmission when the specialist makes an incorrect weather observation entry.

    4) The System must [1597] identify the criteria for acceptable data for a weather observation entry when the specialist makes an incorrect weather observation entry.

    5) The System must [1598] give the user the opportunity to correct the entry in the weather observation.

    6) The System must [1599] provide the capability to override validation when transmitting a weather observation message.

k) The System must [1600] provide the capability to manually log a weather observation.

3.1.1.6.2 Pilot Reports Processing

The System provides for the entering, editing, and transmitting of Routine PIREPs and Urgent PIREPS. The System will transmit pilot reports immediately.

a) The System must [1601] provide the capability to enter multiple pilot reports.

b) The System must [1602] provide the capability to edit multiple pilot reports.

c) The System must [1603] provide the capability to transmit multiple pilot reports.

d) The pilot reports must [1604] include Routine PIREPs.

e) The pilot reports must [1605] include Urgent PIREPs.

f) The System must [1606] format pilot report messages for transmission IAW FMH-12.

    1) The System must [1607] provide the capability to include Accountable Facility data.

    2) The System must [1608] provide the capability to include Pilot Report Type data.

    3) The System must [1609] provide the capability to include Phenomena Location data.

    4) The System must [1610] provide the capability to include Phenomena Time data.

    5) The System must [1611] provide the capability to include Flight Level data.

    6) The System must [1612] provide the capability to include Aircraft Type data.

    7) The System must [1613] provide the capability to include Sky Condition data.

    8) The System must [1614] provide the capability to include Flight Visibility data.

    9) The System must [1615] provide the capability to include Temperature data.

    10) The System must [1616] provide the capability to include Wind Velocity data.

11) The System must [1617] provide the capability to include Turbulence data.

12) The System must [1618] provide the capability to include Icing data.

13) The System must [1619] provide the capability to include Pilot Remarks data.

g) The System must [1620] provide the capability to immediately transmit pilot reports.

h) The System must [1621] validate pilot report messages for transmission IAW FMH-12.

1) The System must [1622] only transmit a pilot report message if no errors are found.

2) The System must [1623] automatically perform syntax error checking on the pilot report entries.

3) The System must [1624] display all error messages upon request for transmission when the user makes an incorrect pilot report entry.

4) The System must [1625] identify the criteria for acceptable data for a pilot report entry when the user makes an incorrect pilot report entry.

5) The System must [1626] give the user the opportunity to correct the entry in the pilot report.

6) The System must [1627] provide the capability to override validation for a pilot report message.

3.1.1.7 NOTAM Processing

Locally generated NOTAMs are sent to the United States NOTAM System (USNS) where a NOTAM number is assigned. The NOTAM is then received back into the System during normal NOTAM receipt processing and stored in the NOTAM database.

3.1.1.7.1 NOTAM Transmit Processing

a) The System must [1628] provide the capability to enter multiple NOTAMs.

b) The System must [1629] provide the capability to edit multiple NOTAMs.

c) The System must [1630] provide the capability to transmit multiple NOTAMs.

d) The System must [1631] provide the capability to enter multiple NOTAM Cancellations.

e) The System must [1632] provide the capability to edit multiple NOTAM Cancellations.

f) The System must [1633] provide the capability to transmit multiple NOTAM Cancellations.

g) The System must [1634] provide the capability to simultaneously enter multiple NOTAMs and multiple NOTAM Cancellations.

h) The System must [1635] provide the capability to simultaneously edit multiple NOTAMs and multiple NOTAM Cancellations.

i) The System must [1636] provide the capability to simultaneously transmit multiple NOTAMs and multiple NOTAM Cancellations.

j) The System must [1637] provide the capability to immediately transmit NOTAMs.

k) The System must [1638] provide the capability to format NOTAM messages for transmission.

l) The System must [1639] validate NOTAM messages for transmission.

1) The System must [1640] only transmit a NOTAM message if no errors are found.

2) The System must [1641] automatically perform syntax error checking on the NOTAM entries.

3) The System must [1642] display all error messages upon request for transmission when the user makes an incorrect NOTAM entry.

4) The System must [1643] identify the criteria for acceptable data for a NOTAM entry when the user makes an incorrect NOTAM entry.

5) The System must [1644] give the user the opportunity to correct the entry in the NOTAM.

6) The System must [1645] provide the capability to override validation for a NOTAM message.

m) The System must [1646] store NOTAM messages upon transmission.

n) The System must [1647] store NOTAM Cancellation messages upon transmission.

3.1.1.7.2 NOTAM Log

a) The System must [1648] maintain a NOTAM Log IAW FAA Order 7930.2.

b) The System must [1649] provide the capability to store NOTAMs in the NOTAM Log.

c) The System must [1650] provide the capability to attach a file to a NOTAM in the NOTAM Log.

d) The System must [1651] provide the capability to import existing NOTAMs into the NOTAM Log.

e) The System must [1652] provide the capability to retrieve NOTAMs from the NOTAM Log using user defined search criteria.

1) The System must [1653] provide the capability to search for NOTAMs in the NOTAM Log by NOTAM number.

2) The System must [1654] provide the capability to search for NOTAMs in the NOTAM Log by NOTAM text.

3) The System must [1655] provide the capability to search for NOTAMs in the NOTAM Log by Accountable Facility.

4) The System must [1656] provide the capability to search for NOTAMs in the NOTAM Log by Affected Facility.

5) The System must [1657] provide the capability to search for NOTAMs in the NOTAM Log by Issuing Facility.

6) The System must [1658] provide the capability to search for NOTAMs in the NOTAM Log by Canceling Facility.

7) The System must [1659] provide the capability to search for NOTAMs in the NOTAM Log by Date.

8) The System must provide the capability to search for NOTAMs in the NOTAM Log by the current state of the NOTAM:

    a. Draft[1660]

    b. Transmitted[2977]

    c.   Active - Notification Required[2978]

    d.   Active[2979]

    e.   Active - Action Upcoming[2980]

    f.   Active - Action Required[2981]

    g.   Cancelled - Notification Required[2982]

    h.   Cancelled[2983]

    i.   Template[2984]

    j.   Cancelled - Action Upcoming[2985]

    k.   Cancelled - Action Required[2986]

    l.   Submitted for Publication[2987]

    m.   Published[2988]

f)   The System must [1661] provide the capability to edit NOTAMs in the NOTAM Log.

g)   The System must [1662] provide the capability to delete NOTAMs from the NOTAM Log.

h)   The System must [1663] retain cancelled NOTAMs in the NOTAM Log for the number of days specified in the Cancelled NOTAM Retention time system parameter.

i)   The System must [1664] provide the capability to create NOTAM Log reports.

    1)   The System must [1665] provide the capability to create a NOTAM Summary report from the NOTAM Log.

        a.   The NOTAM Summary report must [1666] contain a count of NOTAMs transmitted for a specified issuing facility in the last number of days specified in the NOTAM History Data Retention time system parameter.

        b.   The NOTAM summary report must [1667] contain a count of NOTAMs cancelled for a specified issuing facility in the last number of days specified in the NOTAM History Data Retention time system parameter.

    2)   The System must [1668] provide the capability to create an Accountability Log report from the NOTAM Log.

        a.   The Accountability Log report must [1669] contain all active NOTAM Log entries for a specified issuing facility.

        b.   The Accountability Log report must [1670] contain all cancelled NOTAM Log entries for a specified issuing facility.

    3)   The System must [1671] provide the capability to create an Outstanding NOTAM report from the NOTAM Log.

        a.   The Outstanding NOTAM report must [1672] contain all active NOTAM Log entries for a specified issuing facility with a transmit time older than the Number of Days Old system parameter.

j)   The System must [1673] provide the capability to print NOTAM Log reports.

k)   The System must [1674] provide the capability to save NOTAM Log reports.

3.1.1.7.3 NOTAM Coordination Activity

The System allows the storage and retrieval of notification data including the authorized facility personnel and facilities to notify for specific affected facilities. The System provides the capability to record coordination activity as it takes place.

a)   The System must [1675] provide for recording of NOTAM coordination activity.

b)   The System must [1676] provide the capability to store notification data for affected facilities.

    1)   The notification data must [1677] include authorized facility personnel.

    2)   The notification data must [1678] include facilities to notify.

c)   The System must [1679] provide the capability to retrieve notification data for affected facilities.

d)   The System must [1680] provide the capability to display notification data for affected facilities.

e)   The System must [1681] provide the capability to edit notification data for affected facilities.

f)   The System must [1682] provide the capability to delete notification data for affected facilities.

g)   The System must [1683] provide the capability to record coordination activity for a transmitted NOTAM.

    1)   The recorded coordination activity must [1684] include the user that issued the NOTAM.

    2)   The recorded coordination activity must [1685] include the facility that issued the NOTAM.

    3)   The recorded coordination activity must [1686] include the notification time of the NOTAM.

    4)   The recorded coordination activity must [1687] include the authorized personnel that called in the NOTAM.

    5)   The recorded coordination activity must [1688] include a list of facilities that were notified of the NOTAM.

    6)   The recorded coordination activity must [1689] include the initials of the coordinating personnel for each notified facility.

h)   The System must [1690] provide the capability to record coordination activity for a cancelled NOTAM.

    1)   The recorded coordination activity must [1691] include the user that cancelled the NOTAM.

    2)   The recorded coordination activity must [1692] include the facility that cancelled the NOTAM.

    3)   The recorded coordination activity must [1693] include the notification time of the NOTAM cancellation.

    4)   The recorded coordination activity must [1694] include the authorized personnel that called in the NOTAM cancellation.

5) The recorded coordination activity must [1695] include a list of facilities that were notified of the NOTAM cancellation.

6) The recorded coordination activity must [1696] include the initials of the coordinating personnel for each notified facility.

i) The System must [1697] provide the capability to retrieve NOTAM coordination activity history.

j) The System must [1698] provide the capability to display NOTAM coordination activity history.

k) The System must [1699] maintain NOTAM coordination activity history for a number of days specified in the NOTAM History Data Retention time system parameter.

3.1.1.7.4 NOTAM Templates

a) The System must [1700] provide NOTAM templates customized for individual locations/situations to be maintained locally.

b) The System must [1701] provide the capability to create NOTAM templates.

1) The System must [1702] provide a blank NOTAM template mask.

2) The System must [1703] provide the capability to import an existing NOTAM into a NOTAM template.

c) The System must [1704] provide the capability to store NOTAM templates.

d) The System must [1705] provide the capability to retrieve NOTAM templates.

e) The System must [1706] provide the capability to edit NOTAM templates.

f) The System must [1707] provide the capability to delete NOTAM templates.

g) The System must [1708] provide the capability to transmit a NOTAM from a NOTAM template.

3.1.1.8 Training Support Processing

The System provides an on-line tutorial for training. The configuration training mode allows the creation and storage of scripted scenarios as well as the capture of live weather data to use for operational training. The operational training mode allows the replay of stored scenarios in scripted mode as well as messages generated and injected by an instructor in interactive mode.

3.1.1.8.1 Configuration Training Mode

a) The System must [1709] provide a configuration training mode.

b) The System must [1710] enter the configuration training mode without operational impact.

3.1.1.8.2 Scenarios

In configuration training mode, the System captures and stores live weather and aeronautical data. The System also allows the creation, storage, retrieval, edit and deletion of scripted training scenarios containing stored weather data and other messages.

a) The System must [1711] capture live alphanumeric weather data.

b) The System must [1712] capture live aeronautical data.

c) The System must [1713] capture live graphical weather data.

d) The System must [1714] store live alphanumeric weather data.

e) The System must [1715] store live aeronautical data.

f) The System must [1716] store live graphical weather data.

g) The System must [1717] provide the capability to create scripted scenarios.

   1) The System must [1718] provide the capability for scripted scenarios to contain stored alphanumeric weather data.

   2) The System must [1719] provide the capability for scripted scenarios to contain stored aeronautical data.

   3) The System must [1720] provide the capability for scripted scenarios to contain stored graphical weather data.

   4) The System must [1721] provide the capability for scripted scenarios to contain messages.

h) The System must [1722] provide the capability to store scripted scenarios.

i) The System must [1723] provide the capability to retrieve scripted scenarios.

j) The System must [1724] provide the capability to edit scripted scenarios.

k) The System must [1725] provide the capability to delete scripted scenarios.

3.1.1.8.3 Operational Training Mode

a) The System must [1726] provide an operational training mode.

b) The System must [1727] enter the operational training mode without operational impact.

c) The System must [1728] provide a scripted operational training mode.

   1) The scripted mode must [1729] provide the capability to send data in a timed sequence.

d) The System must [1730] provide an interactive operational training mode.

   1) The interactive mode must [1731] provide an instructor with the capability to interactively generate messages.

   2) The interactive mode must [1732] provide an instructor with the capability to interactively send messages.

3.1.1.8.4 Scenario Replay

Scenarios are scripts containing stored alphanumeric weather data, weather graphics and other messages. Scenarios are stored on the System and can be replayed to simulate conditions for training.

a) The System must [1733] provide the capability to replay scripted scenarios on any workstation without operational impact.

b) The System must [1734] provide multiple simultaneous scenario capabilities.

c) The System must [1735] provide the capability to start multiple scripts during a single session replay.

d)   The System must [1736] provide the capability to start new scripts once a session replay has already begun.

e)   The System must [1737] provide a "start" command within the scenario to begin replay.

f)   The System must [1738] provide a "stop" command within the scenario during replay.

g)   The System must [1739] provide a "resume" command within the scenario during replay.

h)   The System must [1740] provide an instantaneous "fast forward" comment to specific times within the scenario during replay.

i)   The System must [1741] provide an instantaneous "rewind" command to specific times within the scenario during replay.

j)   The System must [1742] record each transaction entry during replay.

3.1.1.8.5 Import of Weather Data

a)   The System must [1743] provide the capability to import the stored alphanumeric weather data from other AFSM facilities.

b)   The System must [1744] provide the capability to import the stored aeronautical data from other AFSM facilities.

c)   The System must [1745] provide the capability to import the stored graphical weather data from other AFSM facilities.

3.1.1.8.6 Export of Weather Data

a)   The System must [1746] provide the capability to export the stored alphanumeric weather data to other AFSM facilities.

b)   The System must [1747] provide the capability to export the stored aeronautical data to other AFSM facilities.

c)   The System must [1748] provide the capability to export the stored graphical weather data to other AFSM facilities.

3.1.1.8.7 Online Testing

a)   The System must [1749] provide the capability to import a test.

b)   The System must [1750] be capable of automatically scoring a test.

c)   The System must [1751] provide test statistics.

   1)   The test statistics must [1752] include average test score.

   2)   The test statistics must [1753] include high test score.

   3)   The test statistics must [1754] include low test score.

   4)   The test statistics must [1755] include total number of tests.

   5)   The test statistics must [1756] include results for each question.

3.1.1.9 Supervisory/Administrative Processing

The Supervisory/Administrative Processing section covers the reports on traffic counts, local activity, monitoring of local resources, monitoring System states and modes, maintaining local

knowledge and the supervisor functional reconfiguration and adaptation of operational positions and user IDs.

3.1.1.9.1 Tally Reports

a) The System must [1757] provide exportable tally reports.

    1) The System must [1758] provide an exportable report on traffic count activity.

    2) The System must [1759] provide an exportable report on position log activity.

    3) The System must [1760] provide an exportable report on operational performance metrics.

    4) The System must [1761] provide an exportable report on user comment form metrics.

b) The System must [1762] provide user selectable tally report parameters.

    1) Tally report parameters must [1763] include an option to filter counts by facility.

    2) Tally report parameters must [1764] include an option to include counts for all facilities.

    3) Tally report parameters must [1765] include an hourly option.

    4) Tally report parameters must [1766] include a daily option.

        a. The daily report must [1767] display data in an hourly format.

    5) Tally report parameters must [1768] include a weekly option.

    6) Tally report parameters must [1769] include a date range option.

    7) Tally report parameters must [1770] include a workstation option.

    8) Tally report parameters must [1771] include an option to view reports in chronological or reverse chronological order.

c) The System must [1772] provide an option to schedule automatic tally report generation at configurable intervals.

3.1.1.9.1.1 Traffic Count

The System has the capability to report on local AFSS site activity. The System also has the capability to automatically send traffic count information directly to an FAA national database.

a) The System must [1773] maintain a traffic count database.

b) The System must [1774] provide the capability to display traffic count reports.

c) The System must [1775] provide the capability to print traffic count reports.

d) The System must [1776] provide the capability to save traffic count reports.

e) The System must [1777] provide the capability to create custom traffic count reports.

f) The System must [1778] provide a traffic count for pilot weather briefings.

    1) The pilot weather briefing count must [1779] include preflight briefings.

        a. The pilot weather briefing count must [1780] include Multi-Route briefings.

        b. The pilot weather briefing count must [1781] include Standard briefings.

    c.   The pilot weather briefing count must [1782] include Abbreviated briefings.

        1.   The Abbreviated briefing count must [1783] * include Delta briefings.

    d.   The pilot weather briefing count must [1784] include Outlook briefings.

2)   The pilot weather briefing count must [1785] include inflight briefings.

    a.   The inflight briefing count must [1786] include Multi-Route briefings.

    b.   The inflight briefing count must [1787] include Standard briefings.

    c.   The inflight briefing count must [1788] include Abbreviated briefings.

        1.   The Abbreviated briefing count must [1789] * include Delta briefings.

    d.   The inflight briefing count must [1790] include Outlook briefings.

3)   The pilot weather briefing count must [1791] include over-the-counter briefings.

    a.   The over-the-counter briefing count must [1792] include Multi-Route briefings.

    b.   The over-the-counter briefing count must [1793] include Standard briefings.

    c.   The over-the-counter briefing count must [1794] include Abbreviated briefings.

        1.   The Abbreviated briefing count must [1795] * include Delta briefings.

    d.   The over-the-counter briefing count must [1796] include Outlook briefings.

4)   The pilot weather briefing count must [1797] * include web portal briefings.

    a.   The web portal briefing count must [1798] * include Multi-Route briefings.

    b.   The web portal briefing count must [1799] * include Standard briefings.

    c.   The web portal briefing count must [1800] * include Abbreviated briefings.

        1.   The Abbreviated briefing count must [1801] * include Delta briefings.

    d.   The web portal briefing count must [1802] * include Outlook briefings.

5)   The pilot weather briefing count must [1803] * include remote pilot terminal briefings.

    a.   The remote pilot terminal briefing count must [1804] * include Multi-Route briefings.

    b.   The remote pilot terminal briefing count must [1805] * include Standard briefings.

      c.   The remote pilot terminal briefing count must [1806] * include Abbreviated briefings.

        1. The Abbreviated briefing count must [1807] * include Delta briefings.

      d.   The remote pilot terminal briefing count must [1808] * include Outlook briefings.

g)   The System must [1809] provide a traffic count for inflight aircraft contacts.

   1)   The inflight aircraft contact count must [1810] include domestic and ICAO IFR aircraft contacts.

      a.   The IFR inflight aircraft contact count must [1811] include Air Carrier contacts.

      b.   The IFR inflight aircraft contact count must [1812] include Air Taxi contacts.

      c.   The IFR inflight aircraft contact count must [1813] include General Aviation contacts.

      d.   The IFR inflight aircraft contact count must [1814] include Military contacts.

   2)   The inflight aircraft contact count must [1815] include DVFR aircraft contacts.

      a.   The DVFR inflight aircraft contact count must [1816] include Air Carrier contacts.

      b.   The DVFR inflight aircraft contact count must [1817] include Air Taxi contacts.

      c.   The DVFR inflight aircraft contact count must [1818] include General Aviation contacts.

      d.   The DVFR inflight aircraft contact count must [1819] include Military contacts.

   3)   The inflight aircraft contact count must [1820] include SVFR aircraft contacts.

      a.   The SVFR inflight aircraft contact count must [1821] include Air Carrier contacts.

      b.   The SVFR inflight aircraft contact count must [1822] include Air Taxi contacts.

      c.   The SVFR inflight aircraft contact count must [1823] include General Aviation contacts.

      d.   The SVFR inflight aircraft contact count must [1824] include Military contacts

   4)   The inflight aircraft contact count must [1825] include domestic and ICAO VFR aircraft contacts.

      a.   The VFR inflight aircraft contact count must [1826] include Air Carrier contacts.

      b.   The VFR inflight aircraft contact count must [1827] include Air Taxi contacts.

        c.   The VFR inflight aircraft contact count must [1828] include General Aviation contacts.

        d.   The VFR inflight aircraft contact count must [1829] include Military contacts

h)   The System must [1830] provide a traffic count for inflight radio contacts.

    1)   The inflight radio contact count must [1831] include domestic and ICAO IFR radio contacts.

        a.   The IFR inflight aircraft contact count must [1832] include Air Carrier contacts.

        b.   The IFR inflight aircraft contact count must [1833] include Air Taxi contacts.

        c.   The IFR inflight aircraft contact count must [1834] include General Aviation contacts.

        d.   The IFR inflight aircraft contact count must [1835] include Military contacts.

    2)   The inflight radio contact count must [1836] include DVFR radio contacts.

        a.   The DVFR inflight aircraft contact count must [1837] include Air Carrier contacts.

        b.   The DVFR inflight aircraft contact count must [1838] include Air Taxi contacts.

        c.   The DVFR inflight aircraft contact count must [1839] include General Aviation contacts.

        d.   The DVFR inflight aircraft contact count must [1840] include Military contacts.

    3)   The inflight radio contact count must [1841] include SVFR radio contacts.

        a.   The SVFR inflight aircraft contact count must [1842] include Air Carrier contacts.

        b.   The SVFR inflight aircraft contact count must [1843] include Air Taxi contacts.

        c.   The SVFR inflight aircraft contact count must [1844] include General Aviation contacts.

        d.   The SVFR inflight aircraft contact count must [1845] include Military contacts.

    4)   The inflight radio contact count must [1846] include domestic and ICAO VFR radio contacts.

        a.   The VFR inflight aircraft contact count must [1847] include Air Carrier contacts.

        b.   The VFR inflight aircraft contact count must [1848] include Air Taxi contacts.

        c.   The VFR inflight aircraft contact count must [1849] include General Aviation contacts.

      d.   The VFR inflight aircraft contact count must [1850] include Military contacts.

i)   The System must [1851] provide a traffic count for clearances delivered.

    1)   The clearances delivered count must [1852] include SVFR clearances delivered.

    2)   The clearances delivered count must [1853] include IFR clearances delivered.

j)   The System must [1854] provide a traffic count for airport advisories.

k)   The System must [1855] provide a traffic count for domestic flight plan actions.

    1)   The domestic flight plan actions count must [1856] include flight plans filed.

        a.   The domestic flight plans filed count must [1857] include IFR flight plans filed.

        b.   The domestic flight plans filed count must [1858] include DVFR flight plans filed.

        c.   The domestic flight plans filed count must [1859] include VFR flight plans filed.

    2)   The domestic flight plan actions count must [1860] include flight plans amended.

        a.   The domestic flight plans amended count must [1861] include IFR flight plans amended.

        b.   The domestic flight plans amended count must [1862] include DVFR flight plans amended.

        c.   The domestic flight plans amended count must [1863] include VFR flight plans amended.

    3)   The domestic flight plan actions count must [1864] include flight plans cancelled.

        a.   The domestic flight plans cancelled count must [1865] include IFR flight plans cancelled.

        b.   The domestic flight plans cancelled count must [1866] include DVFR flight plans cancelled.

        c.   The domestic flight plans cancelled count must [1867] include VFR flight plans cancelled.

    4)   The domestic flight plan actions count must [1868] include flight plans closed.

        a.   The domestic flight plans closed count must [1869] include IFR flight plans closed.

        b.   The domestic flight plans closed count must [1870] include DVFR flight plans closed.

        c.   The domestic flight plans closed count must [1871] include VFR flight plans closed.

l)   The System must [1872] provide a traffic count for ICAO flight plan actions.

    1)   The ICAO flight plan actions count must [1873] include flight plans filed.

        a.   The ICAO flight plans filed count must [1874] include IFR flight plans filed.

       b. The ICAO flight plans filed count must [1875] include VFR flight plans filed.

  2) The ICAO flight plan actions count must [1876] include flight plans amended.

       a. The ICAO flight plans amended count must [1877] include IFR flight plans amended.

       b. The ICAO flight plans amended count must [1878] include VFR flight plans amended.

  3) The ICAO flight plan actions count must [1879] include flight plans cancelled.

       a. The ICAO flight plans cancelled count must [1880] include IFR flight plans cancelled.

       b. The ICAO flight plans cancelled count must [1881] include VFR flight plans cancelled.

  4) The ICAO flight plan actions count must [1882] include flight plans closed.

       a. The ICAO flight plans closed count must [1883] include IFR flight plans closed.

       b. The ICAO flight plans closed count must [1884] include VFR flight plans closed.

m) The System must [1885] * provide a traffic count for domestic flight plan actions originated from a web portal.

  1) The web portal domestic flight plan actions count must [1886] * include flight plans filed.

       a. The web portal domestic flight plans filed count must [1887] * include IFR flight plans filed.

       b. The web portal domestic flight plans filed count must [1888] * include DVFR flight plans filed.

       c. The web portal domestic flight plans filed count must [1889] * include VFR flight plans filed.

  2) The web portal domestic flight plan actions count must [1890] * include flight plans amended.

       a. The web portal domestic flight plans amended count must [1891] * include IFR flight plans amended.

       b. The web portal domestic flight plans amended count must [1892] * include DVFR flight plans amended.

       c. The web portal domestic flight plans amended count must [1893] * include VFR flight plans amended.

  3) The web portal domestic flight plan actions count must [1894] * include flight plans cancelled.

       a. The web portal domestic flight plans cancelled count must [1895] * include IFR flight plans cancelled.

       b. The web portal domestic flight plans cancelled count must [1896] * include DVFR flight plans cancelled.

       c.   The web portal domestic flight plans cancelled count must [1897] * include VFR flight plans cancelled.

    4)   The web portal domestic flight plan actions count must [1898] * include flight plans closed.

       a.   The web portal domestic flight plans closed count must [1899] * include IFR flight plans closed.

       b.   The web portal domestic flight plans closed count must [1900] * include DVFR flight plans closed.

       c.   The web portal domestic flight plans closed count must [1901] * include VFR flight plans closed.

n)   The System must [1902] * provide a traffic count for ICAO flight plan actions originated from a web portal.

    1)   The web portal ICAO flight plan actions count must [1903] * include flight plans filed.

       a.   The web portal ICAO flight plans filed count must [1904] * include IFR flight plans filed.

       b.   The web portal ICAO flight plans filed count must [1905] * include VFR flight plans filed.

    2)   The web portal ICAO flight plan actions count must [1906] * include flight plans amended.

       a.   The web portal ICAO flight plans amended count must [1907] * include IFR flight plans amended.

       b.   The web portal ICAO flight plans amended count must [1908] * include VFR flight plans amended.

    3)   The web portal ICAO flight plan actions count must [1909] * include flight plans cancelled.

       a.   The web portal ICAO flight plans cancelled count must [1910] * include IFR flight plans cancelled.

       b.   The web portal ICAO flight plans cancelled count must [1911] * include VFR flight plans cancelled.

    4)   The web portal ICAO flight plan actions count must [1912] * include flight plans closed.

       a.   The web portal ICAO flight plans closed count must [1913] * include IFR flight plans closed.

       b.   The web portal ICAO flight plans closed count must [1914] * include VFR flight plans closed.

o)   The System must [1915] * provide a traffic count for domestic flight plan actions originating from a remote pilot terminal.

    1)   The remote pilot terminal domestic flight plan actions count must [1916] * include flight plans filed.

       a.   The remote pilot terminal domestic flight plans filed count must [1917] * include IFR flight plans filed.

      b.   The remote pilot terminal domestic flight plans filed count must [1918] * include DVFR flight plans filed.

      c.   The remote pilot terminal domestic flight plans filed count must [1919] * include VFR flight plans filed.

2)   The remote pilot terminal domestic flight plan actions count must [1920] * include flight plans amended.

      a.   The remote pilot terminal domestic flight plans amended count must [1921] * include IFR flight plans amended.

      b.   The remote pilot terminal domestic flight plans amended count must [1922] * include DVFR flight plans amended.

      c.   The remote pilot terminal domestic flight plans amended count must [1923] * include VFR flight plans amended.

3)   The remote pilot terminal domestic flight plan actions count must [1924] * include flight plans cancelled.

      a.   The remote pilot terminal domestic flight plans cancelled count must [1925] * include IFR flight plans cancelled.

      b.   The remote pilot terminal domestic flight plans cancelled count must [1926] * include DVFR flight plans cancelled.

      c.   The remote pilot terminal domestic flight plans cancelled count must [1927] * include VFR flight plans cancelled.

4)   The remote pilot terminal domestic flight plan actions count must [1928] * include flight plans closed.

      a.   The remote pilot terminal domestic flight plans closed count must [1929] * include IFR flight plans closed.

      b.   The remote pilot terminal domestic flight plans closed count must [1930] * include DVFR flight plans closed.

      c.   The remote pilot terminal domestic flight plans closed count must [1931] * include VFR flight plans closed.

p)   The System must [1932] * provide a traffic count for ICAO flight plan actions originating from a remote pilot terminal.

1)   The remote pilot terminal ICAO flight plan actions count must [1933] * include flight plans filed.

      a.   The remote pilot terminal ICAO flight plans filed count must [1934] * include IFR flight plans filed.

      b.   The remote pilot terminal ICAO flight plans filed count must [1935] * include VFR flight plans filed.

2)   The remote pilot terminal ICAO flight plan actions count must [1936] * include flight plans amended.

      a.   The remote pilot terminal ICAO flight plans amended count must [1937] * include IFR flight plans amended.

      b.   The remote pilot terminal ICAO flight plans amended count must [1938] * include VFR flight plans amended.

3) The remote pilot terminal ICAO flight plan actions count must [1939] * include flight plans cancelled.

    a. The remote pilot terminal ICAO flight plans cancelled count must [1940] * include IFR flight plans cancelled.

    b. The remote pilot terminal ICAO flight plans cancelled count must [1941] * include VFR flight plans cancelled.

4) The remote pilot terminal ICAO flight plan actions count must [1942] * include flight plans closed.

    a. The remote pilot terminal ICAO flight plans closed count must [1943] * include IFR flight plans closed.

    b. The remote pilot terminal ICAO flight plans closed count must [1944] * include VFR flight plans closed.

q) The System must [1945] provide a traffic count for search and rescue actions.

    1) The search and rescue traffic count must [1946] include QALQs.

    2) The search and rescue traffic count must [1947] include INREQs.

    3) The search and rescue traffic count must [1948] include ALNOTs.

    4) The search and rescue traffic count must [1949] include INCERFAs.

    5) The search and rescue traffic count must [1950] include ALERFAs.

    6) The search and rescue traffic count must [1951] include DESTRESFAs.

    7) The search and rescue traffic count must [1952] include "late action" SARs.

r) The System must [1953] provide a traffic count for NOTAM actions.

    1) The NOTAM actions count must [1954] include NOTAMs issued.

    2) The NOTAM actions count must [1955] include NOTAMs cancelled.

s) The System must [1956] provide a traffic count for pilot reports transmitted.

t) The System must [1957] provide a traffic count for weather observation actions.

    1) The System must [1958] provide a traffic count for weather observations transmitted.

    2) The System must [1959] provide a traffic count for weather observations logged.

u) The System must [1960] provide a traffic count for unrecognized general messages edited by the local facility.

v) The System must [1961] provide a traffic count for manually recorded broadcasts.

w) The System must [1962] provide a traffic count for calls to the telephone information briefing system.

    1) The calls to the telephone information briefing system count must [1963] include calls received.

    2) The calls to the telephone information briefing system count must [1964] include calls abandoned.

    3) The calls to the telephone information briefing system count must [1965] include average delays.

    4) The calls to the telephone information briefing system count must [1966] include calls to listen to automated broadcasts.

x) The System must [1967] provide custom report parameters.

    1) The custom report parameters must [1968] provide the capability to create up to 10 custom keywords.

        a. The custom keywords must [1969] contain 1-5 alphanumeric characters.

    2) The System must [1970] provide the capability to count custom report parameters.

    3) The custom report parameter counts must [1971] be displayed in the traffic count report.

y) The System must [1972] transmit information from the traffic count database directly into the FAA national database.

    1) The System must [1973] provide the capability to approve the traffic count information before transmission to the FAA national database.

    2) The System must [1974] provide the capability to edit the traffic count information before transmission to the FAA national database.

3.1.1.9.1.2   Position Log

a) The System must [1975] maintain a position log database.

b) The System must [1976] provide the capability to display position log reports.

c) The System must [1977] provide the capability to print position log reports.

d) The System must [1978] provide the capability to save position log reports.

e) The System must [1979] provide a local position log activity report based upon User IDs.

f) The System must [1980] provide a local position log activity report based upon Workstation IDs.

g) The System must [1981] provide a local position log activity report based upon facilities.

h) The System must [1982] provide a local position log activity report based upon position type.

3.1.1.9.1.3   Operational Performance Metrics

a) The System must [1983] provide the capability to display operational performance metric reports.

b) The System must [1984] provide the capability to print operational performance metric reports.

c) The System must [1985] provide the capability to save operational performance metric reports.

d) The System must [1986] provide the capability to create custom operational performance metric reports.

e)   The System must [1987] provide a count of user comment forms submitted.

f)   The System must [1988] provide an average test score.

g)   The System must [1989] provide a count of IFR flight plans rejects received.

h)   The System must [1990] provide a count of Arrival messages received with "FPNO" in the remarks.

i)   The System must [1991] provide a count of transmitted NOTAMs rejected.

j)   The System must [1992] provide a count of transmitted weather observations rejected.

k)   The System must [1993] provide a count of transmitted pilot reports rejected.

l)   The System must [1994] provide a report of all NOTAM and NOTAM Cancellation messages transmitted.

   1)   The NOTAM transmitted report must [1995] contain the text of each message.

   2)   The NOTAM transmitted report must [1996] contain the transmit time of each message.

   3)   The NOTAM transmitted report must [1997] contain the transmitting workstation id of each message.

   4)   The NOTAM transmitted report must [1998] contain the transmitting user id of each message.

m)   The System must [1999] provide a report of all weather observations transmitted.

   1)   The weather observation transmitted report must [2000] contain the text of each message.

   2)   The weather observation transmitted report must [2001] contain the transmit time of each message.

   3)   The weather observation transmitted report must [2002] contain the transmitting workstation id of each message.

   4)   The weather observation transmitted report must [2003] contain the transmitting user id of each message.

n)   The System must [2004] provide a report of all pilot reports transmitted.

   1)   The pilot report transmitted report must [2005] contain the text of each message.

   2)   The pilot report transmitted report must [2006] contain the transmit time of each message.

   3)   The pilot report transmitted report must [2007] contain the transmitting workstation id of each message.

   4)   The pilot report transmitted report must [2008] contain the transmitting user id of each message.

o)   The System must [2009] provide a report of all flight plans rejected.

   1)   The flight plans rejected report must [2010] contain each reject message.

   2)   The flight plans rejected report must [2011] contain the associated flight plan message for each reject.

   3)   The flight plans rejected report must [2012] contain the receipt time of each reject message.

    4) The flight plans rejected report must [2013] contain the transmit time of each flight plan message.

    5) The flight plans rejected report must [2014] contain the transmitting workstation id of each flight plan message.

    6) The flight plans rejected report must [2015] contain the transmitting user id of each flight plan message.

p) The System must [2016] provide a SAR activity report.

    1) The SAR activity report must [2017] contain all SAR messages transmitted.

    2) The SAR activity report must [2018] contain all SAR messages received.

    3) The SAR activity report must [2019] contain all flight plan actions for aircraft ids associated with SAR messages.

        a. Flight plan actions must [2020] include flight plans filed.

        b. Flight plan actions must [2021] include flight plans activated.

        c. Flight plan actions must [2022] include flight plans amended.

        d. Flight plan actions must [2023] include flight plans cancelled.

        e. Flight plan actions must [2024] include flight plans closed.

    4) The SAR activity report must [2025] contain all pilot weather briefing log entries for aircraft ids associated with SAR messages.

    5) The SAR activity report must [2026] contain all inflight aircraft contacts for aircraft ids associated with SAR messages.

    6) The SAR activity report must [2027] contain all inflight radio contacts for aircraft ids associated with SAR messages.

    7) The SAR activity report must [2028] contain all SVCB messages transmitted for aircraft ids associated with SAR messages.

    8) The SAR activity report must [2029] contain all SVCB messages received for aircraft ids associated with SAR messages.

q) The System must [2030] * provide counts of calls to the telephone information briefing system.

    1) The System must [2031] * provide a count of calls to the telephone information briefing system answered within dynamic time parameters.

    2) The System must [2032] * provide a count of calls to the telephone information briefing system answered within dynamic time parameters divided by total number of calls received per hour.

    3) The System must [2033] * provide a count of calls to the telephone information briefing system answered within dynamic time parameters divided by total number of calls received per day.

    4) The System must [2034] * provide a count of calls to the telephone information briefing system dropped/abandoned exceeding dynamic time.

    5) The System must [2035] * provide a count of calls to the telephone information briefing system dropped/abandoned exceeding dynamic time parameters divided by total number of calls received per hour.

6) The System must [2036] * provide a count of calls to the telephone information briefing system dropped/abandoned exceeding dynamic time parameters divided by total number of calls received per day.

3.1.1.9.1.4 User Comment Form Metrics

a) The System must [2037] provide the capability to display completed user comment forms.

b) The System must [2038] provide the capability to print completed user comment forms.

c) The System must [2039] provide the capability to save completed user comment forms.

d) The System must [2040] generate an alert message upon receipt of a completed user comment form.

3.1.1.9.2 Monitor System

a) The System must [2041] monitor local resource use.

    1) The System must [2042] use an industry standard COTS network management package, that is acceptable to the FAA, to monitor local resource utilization.

        a. The System must [2043] monitor disk space utilization.

        b. The System must [2044] monitor CPU utilization.

    2) The System must [2045] use an industry standard COTS network management package to monitor local resource configuration.

    3) The System must [2046] report local resource alarm conditions.

b) The System must [2047] monitor all external interface statuses.

    1) The System must [2048] report all external interface alarm conditions.

c) The System must [2049] monitor system status.

    1) The System must [2050] report system alarm conditions.

d) The System must [2051] monitor system alarms.

3.1.1.9.3 Workstation Configuration

a) The System workstations must [2052] be configurable by operational function.

b) The System must [2053] provide the capability to configure an operational function by allowing specific functional privileges.

3.1.1.9.4 User Assignments

a) The System must [2054] provide the capability to create individual unique User IDs.

b) The System must [2055] provide the capability to assign User IDs to specific groups.

c) The System must [2056] provide the capability to assign operational functions to specific User IDs.

d) The System must [2057] provide the capability to assign operational functions to specific groups.

3.1.1.9.5 Local Knowledge

a) The System must [2058] provide the capability to store local knowledge associated with geographic locations in the form of static data.

b) The System must [2059] provide the capability to display local knowledge associated with geographic locations.

1) The System must [2060] overlay local knowledge onto any earth locatable graphic map.

c) The System must [2061] provide the capability to edit local knowledge associated with geographic locations.

d) The System must [2062] provide the capability to delete local knowledge associated with geographic locations.

3.1.1.9.6 Monitoring States and Modes

The editing of a facility state may be necessary in certain cases where the state of the facility is unlikely to change. For example, in the case where a site has failed and will not re-open, the state may be manually changed from 'failed' to 'closed'. This will prevent the system from remaining in the degraded state indefinitely.

a) The System must [2063] provide the capability to monitor the mode of the entire AFSM Automation System.

b) The System must [2064] provide the capability to monitor the states of all of the individual AFSM facilities.

1) The System must [2065] provide the capability to manually edit the state of each AFSM facility.

2) The System must [2066] indicate the status of each AFSM Service for each facility.

3.1.1.10 Continuous Data Recording

The System is synchronized to a calibrated national standard time source in UTC format. All data uses this time source, is continuously history recorded, and retained for a configurable time period. Critical data required for system recovery is also recorded.

a) The System must [2067] provide a fully redundant, high-availability disk storage device.

b) The System must [2068] be synchronized to a calibrated national standard time source in UTC format.

c) The System must [2069] timestamp all history recorded data to a calibrated national time standard source in UTC format.

d) The System must [2070] retain all history recorded data, including the hardware configuration, for a number of days specified in the History Data Retention time system parameter.

e) The System must [2071] delete history recorded data after the number of days specified in the History Data Retention time system parameter.

f) The System must [2072] history record all input data packets from internal sources.

g) The System must [2073] history record all input data packets from external sources.

h)   The System must [2074] history record all output data packets to internal sources.

i)   The System must [2075] history record all output data packets to external sources.

j)   The System must [2076] history record all input weather graphic products.

k)   The System must [2077] history record all user transactions.

   1)   The System must [2078] history record the user id.

   2)   The System must [2079] history record the workstation id.

l)   The System must [2080] history record all data necessary to recreate system environment.

   1)   The System must [2081] history record system status.

   2)   The System must [2082] history record system performance.

   3)   The System must [2083] history record all critical data required for recovery of the system to a serviceable state.

   4)   The System must [2084] history record all critical data required for return of the system to a serviceable state.

   5)   The System must [2085] provide the capability to access the critical history recorded data required for operations regardless of system status.

      a.   The System must [2086] record Proposed List data on a fully redundant, high-availability disk storage device.

      b.   The System must [2087] record Suspense List data on a fully redundant, high-availability disk storage device.

      c.   The System must [2088] record Inbound List data on a fully redundant, high-availability disk storage device.

      d.   The System must [2089] record all Flight data on a fully redundant, high-availability disk storage device.

m)   The System must [2090] provide the capability to archive historical data for further use.

3.1.1.11 Event Reconstruction

a)   The System must [2091] provide the capability to retrieve history recorded data without interference with the live operational system.

   1)   The System must [2092] accommodate the retrieval of the largest single message size.

b)   The System must [2093] provide the capability to reconstruct history recorded data in time sequence without interference with the live operational system.

   1)   The System must [2094] provide the reconstructed history recorded data within the performance parameters of the request for reconstruction.

   2)   The System must [2095] provide the capability to perform Event Reconstruction of input data packets from internal sources.

   3)   The System must [2096] provide the capability to perform Event Reconstruction of input data packets from external sources.

   4)   The System must [2097] provide the capability to perform Event Reconstruction of output data packets to internal sources.

5) The System must [2098] provide the capability to perform Event Reconstruction of output data packets to external sources.

6) The System must [2099] provide the capability to perform Event Reconstruction of user transactions.

    a. The System must [2100] provide the capability for Event Reconstruction of alphanumeric transactions.

    b. The System must [2101] provide the capability for Event Reconstruction of graphical transactions.

c) The System must [2102] provide the capability to display reconstructed history recorded data.

d) The System must [2103] provide the capability to print reconstructed history recorded data.

e) The System must [2104] provide the capability to generate an Event Reconstruction report on Flight Service user-defined operational information.

    1) The Event Reconstruction report must [2105] include the current date.

    2) The Event Reconstruction report must [2106] include the current time.

    3) The Event Reconstruction report must [2107] include the search parameters used in reconstructing the user transaction history recorded data.

        a. The Event Reconstruction report must [2108] include User Id.

        b. The Event Reconstruction report must [2109] include workstation id.

        c. The Event Reconstruction report must [2110] include aircraft id.

        d. The Event Reconstruction report must [2111] include a general string wildcard search.

    4) The Event Reconstruction report must [2112] include the search parameters used in reconstructing the weather input and output history recorded data.

        a. The Event Reconstruction report must [2113] include the specified weather report only.

        b. The Event Reconstruction report must [2114] include the specified location(s) only.

        c. The Event Reconstruction report must [2115] include a general string wildcard search.

    5) The Event Reconstruction report must [2116] include the search parameters used in reconstructing the SVCB input and output history recorded data.

        a. The Event Reconstruction report must [2117] include the aircraft id.

        b. The Event Reconstruction report must [2118] include a general string wildcard search.

    6) The Event Reconstruction report must [2119] include the search start time in DTG format.

    7) The Event Reconstruction report must [2120] include the search stop time in DTG format.

8) The Event Reconstruction report must [2121] include the user's identification requesting the information.

9) The Event Reconstruction report must [2122] include a certification area.

    a. The certification area must [2123] include a certification statement.

    b. The certification area must [2124] include a signature line.

10) The Event Reconstruction report must [2125] show clearly the exact data and format of input data packets from internal sources.

11) The Event Reconstruction report must [2126] show clearly the exact data and format of input data packets from external sources.

12) The Event Reconstruction report must [2127] show clearly the exact data and format of output data packets to internal sources.

13) The Event Reconstruction report must [2128] show clearly the exact data and format of output data packets to external sources.

14) The Event Reconstruction report must [2129] show clearly the exact data and format of user transactions.

f) The System must [2130] provide an Event Reconstruction playback mode.

1) The Event Reconstruction playback mode must [2131] include alphanumeric transactions.

2) The Event Reconstruction playback mode must [2132] include graphical transactions.

g) The System must [2133] provide the capability to print an Event Reconstruction report.

h) The System must [2134] provide the capability to save an Event Reconstruction report.

1) The System must [2135] provide the option to save an Event Reconstruction report in a non-modifiable format.

2) The System must [2136] provide the option to save an Event Reconstruction report in standard file formats.

3) The System must [2137] provide the option to save an Event Reconstruction report to local storage devices.

4) The System must [2138] provide the option to save an Event Reconstruction report to external storage devices.

3.1.1.12 Monitor and Control

a) The System Monitor and Control function must [2139] monitor system/site health.

b) The System Monitor and Control function must [2140] monitor system/site performance.

c) The System Monitor and Control function must [2141] generate visual alarms at both system level and at flight service sites.

d) The System must [2142] history record acknowledgement of alarms.

e) The System Monitor and Control function must [2143] generate visual alarms in case of errors that may affect system/site operation.

f) The System Monitor and Control function must [2144] generate visual alarms in case of out of tolerance conditions that may affect system/site operation.

g)   The System Monitor and Control function must [2145] generate visual alarms in case of recovery actions that may affect system/site operation.

h)   The System Monitor and Control function must [2146] generate visual alarms in case of overloads (i.e. memory, processor, database, comm. lines) that may affect system/site operation.

i)   The System Monitor and Control function must [2147] generate visual alarms in case of failed Lowest Replaceable Unit (LRUs) that may affect system/site operation.

j)   The System Monitor and Control function must [2148] generate visual alarms in case of other conditions that may affect system/site operation.

k)   The System Monitor and Control function must [2149] generate audible alarms.

l)   The System Monitor and Control function must [2150] provide the capability for users to adjust the volume of audible alarms.

m)   The System Monitor and Control function must [2151] provide the capability for users to mute audible alarms.

n)   The System Monitor and Control function must [2152] generate audible alarms in case of system errors that may affect system/site operation.

o)   The System Monitor and Control function must [2153] generate audible alarms in case of out of tolerance conditions that may affect system/site operation.

p)   The System Monitor and Control function must [2154] generate audible alarms in case of recovery actions that may affect system/site operation.

q)   The System Monitor and Control function must [2155] generate audible alarms in case of overloads (i.e. memory, processor, database, comm. lines) that may affect system/site operation.

r)   The System Monitor and Control function must [2156] generate audible alarms in case of failed LRUs that may affect system/site operation.

s)   The System Monitor and Control function must [2157] generate audible alarms in case of other conditions that may affect system/site operation.

3.1.1.13 Reserved

Reserved.

3.1.1.14 Alternate Access

a)   The System must [2158] * provide access through a web portal connection.

b)   The System must [2159] provide access through a remote user access terminal.

c)   The System must [2160] provide activity reports for alternate access connections.

3.1.1.14.1 Web Portal

a)   The System web portal must [2161] * provide user access through an FAA-approved web portal.

b)   The System web portal must [2162] * be available from all user workstations.

c)   The System web portal must [2163] * use a standard web browser for the user interface.

d) The System web portal must [2164] * comply with US Government and FAA security requirements.

e) The System web portal must [2165] * comply with US Government and FAA web content policies.

f) The System web portal must [2166] * provide low bandwidth web pages for users who have low connection speed Internet connections.

g) The System web portal must [2167] * provide users access to current System weather databases.

h) The System web portal must [2168] * provide a glossary of aviation weather terms.

i) The System web portal must [2169] * provide historical (trend) weather information.

j) The System web portal must [2170] * provide 3-character to 4-character location identifier (LOCID) conversion.

k) The System web portal must [2171] * provide 4-character to 3-character LOCID conversion.

l) The System web portal must [2172] * provide 3-character/4-character LOCID encode and decode.

m) The System web portal must [2173] * display current Alaskan Pilot Bulletins.

n) The System web portal must [2174] * provide the capability to file domestic VFR flight plans.

o) The System web portal must [2175] * provide the capability to file domestic IFR flight plans.

p) The System web portal must [2176] * provide the capability to file ICAO VFR flight plans.

q) The System web portal must [2177] * provide the capability to file ICAO IFR flight plan.

r) The System web portal must [2178] * provide the capability to file DVFR flight plans.

s) The System web portal must [2179] * have access to the Master Flight Plan database.

t) The System web portal must [2180] * have access to AFPT.

  1) The System web portal must [2181] * only provide AFPT data for Aircraft IDs associated with the current user.

u) The System web portal must [2182] * provide route briefings.

v) The System web portal must [2183] * provide area briefings.

w) The System web portal must [2184] * provide GPS RAIM prediction tool data in an understandable graphical form.

x) The System web portal must [2185] * support Personal Desktop Assistant (PDA) and Small Screen Rendering (SSR) devices.

y) The System web portal must [2186] * provide interactive weather briefings with a FSS specialist if requested by the user.

z) The System web portal must [2187] * support weather and aeronautical information from a FSS delivery via an e-mail messaging platform.

aa) The System web portal must [2188] * support Pilot/Flight Service user forums.

bb) The System web portal must [2189] * provide the capability to complete user comment forms.

cc) The System web portal must [2190] * provide notification of submitted user comment forms.

dd) The System web portal must [2191] * provide access to FAA Weather Cameras.

ee) The System web portal must [2192] * provide the capability to cancel VFR flight plans.

ff) The System web portal must [2193] * provide the capability to close VFR flight plans.

gg) The System web portal must [2194] * provide the capability to amend VFR flight plans.

hh) The System web portal must [2195] * provide a Plain Language selection.

ii) The System web portal must provide access to the following flight planning functionalities:

   1) Calculations for flight plan time to climb[2196] *
   2) Calculations for enroute fuel[2989] *
   3) Calculations for fuel usage estimates[2990] *
   4) Calculations for winds aloft[2991] *

jj) The System web portal must provide access to the following flight planning resources:

   1) Sectional charts[2992] *
   2) IFR Enroute High and Low Altitude charts[2993] *
   3) Terminal Procedures[2994] *
   4) Airport Diagrams[2995] *
   5) Sunrise, Sunset, and Civil Twilight tables[2996] *
   6) FAA Airport/Facility Directory (A/FD)[2997] *

3.1.1.14.2 Remote User Access Terminal

a) The System must [2198] provide access through a remote user access terminal.

b) The System must [2199] provide access through a remote user access terminal to weather briefing products.

c) The System must [2200] provide access through a remote user access terminal to the same data that is available to the flight service specialist.

d) The System must [2201] provide access through a remote user access terminal that is configurable for temporary Flight Service Station operations.

e) The System remote user access terminal must [2202] provide the capability to host the remote user access terminal software on a mobile computer system (e.g., laptop).

f) The System remote user access terminal software must [2203] be configurable by an Air Traffic system administrator employed at the AFSS where it is stored.

g) The System remote user access terminal must [2204] provide access to the System web portal web pages.

3.1.1.14.3 User Remote Pilot Terminal

a) The System must [2205] * be accessible through a user remote pilot terminal.

b) The System user remote pilot terminal must [2206] * use an industry standard web browser.

c) The System user remote pilot terminal must [2207] * provide access to the System web portal web pages.

d) The System user remote pilot terminal must [2208] * restrict access to non-System web portal web sites.

e) The System user remote pilot terminal must [2209] * provide an online help feature.

f) The System user remote pilot terminal must [2210] * advise the user when a low bandwidth condition exists.

g) The System must [2211] * report degraded bandwidth of a user remote pilot terminal installation to a system administrator.

h) The System must [2212] * report degraded service of a user remote pilot terminal installation to a system administrator.

i) The System must [2213] * report an out of service condition of a user remote pilot terminal installation to a system administrator.

3.1.1.14.4 Exportable Activity Reports

a) The System must [2214] provide exportable activity reports.

b) The System must [2215] * provide exportable web portal activity reports.

c) The System must [2216] * provide web portal activity reports with user selectable report parameters.

d) The System must [2217] * provide exportable remote pilot terminal activity reports.

e) The System must [2218] * provide remote pilot terminal activity reports with user selectable report parameters.

3.1.1.15 Automated Text to Voice (ATTV) Processing

a) The System must [2219] provide an interface to the existing Automated Text To Voice (ATTV) system.

b) The System must [2220] provide alphanumeric data to the existing ATTV system for use in the transmitting of Telephone Information Briefing Service (TIBS) and Transcribed Weather Broadcasts (TWEB).

c) The System must [2221] provide alphanumeric data consisting of Area Forecasts, SIGMETS, AIRMETS Winds Aloft Forecasts, TAFs, METARs, and PIREPs to the existing ATTV system.

d) The System must [2222] provide alphanumeric data to the existing ATTV system every 2 minutes.

e) The System must [2223] be configurable so that user defined products can be output for text to voice processing.

f) The System must [2224] * integrate the functionality of the existing ATTV system into the AFSM Automation System.

3.1.1.16 Automated Voice to Text (AVTT) Processing

a)   The System must [2225] * provide Automated Voice to Text functionality.

3.1.2   AFSM External Interfaces

a)   The System must [2226] interface with automation systems in each of the National Airspace System (NAS) domains, and other non-NAS elements as needed to provide the necessary products for the Flight Service user.

b)   The System must [2227] interface in accordance with applicable Interface Requirements Documents (IRDs) and Interface Control Documents (ICDs).

c)   The System must [2228] interface with external FAA maintenance processing capabilities present at deployment of the modernized System.

3.1.2.1   Required AFSM External Interfaces

The System interfaces with various elements to provide required information for Flight Service operations. Required interfaces as specified in the AFSM Automation System IRD are listed in the paragraphs below.

3.1.2.1.1   Air Marine Operations Center (AMOC)

a)   The System must [2229] interface with AMOC as defined in the applicable IRD/ICD.

3.1.2.1.2   Direct User Access Terminal (DUAT) System

a)   The System must [2230] interface with the DUAT System as defined in the applicable IRD/ICD.

3.1.2.1.3   Direct User Access Terminal System (DUATs)

a)   The System must [2231] interface with the DUATs system as defined in the applicable IRD/ICD.

3.1.2.1.4   En Route Automation Modernization (ERAM) System

a)   The System must [2232] interface with the ERAM System as defined in the applicable IRD/ICD.

3.1.2.1.5   Flight Data Processing 2000 (FDP 2000)

a)   The System must [2233] interface with FDP 2000 System as defined in the applicable IRD/ICD.

3.1.2.1.6   Host Computer System (HCS)

a)   The System must [2234] interface with the HCS as defined in the applicable IRD/ICD.

3.1.2.1.7   NAVCANADA

a)   The System must [2235] interface with NAVCANADA as defined in the applicable IRD/ICD.

3.1.2.1.8   Flight Service for the 21st Century (FS21) System

a)   The System must [2236] interface with the FS21 system as defined in the applicable IRD/ICD.

3.1.2.1.9   North American Aerospace Defense Command (NORAD)

a)   The System must [2237] interface with NORAD as defined in the applicable IRD/ICD.

3.1.2.1.10   Operational and Supportability Implementation System (OASIS)

a)   The System must [2238] interface with OASIS as defined in the applicable IRD/ICD.

3.1.2.1.11   Military Base Operations (MBO)

a)   The System must [2239] interface with MBO as defined in the applicable IRD/ICD.

3.1.2.1.12   Air Traffic Control System Command Center (ATCSCC)

a)   The System must [2240] interface with ATCSCC as defined in the applicable IRD/ICD.

3.1.2.1.13   United States NOTAM System (USNS)

a)   The System must [2241] interface with the USNS as defined in the applicable IRD/ICD.

3.1.2.1.14   El Paso Intelligence Center (EPIC)

a)   The System must [2242] interface with EPIC as defined in the applicable IRD/ICD.

3.1.2.1.15   Weather Message Switching Center Replacement (WMSCR)

a)   The System must [2243] interface with WMSCR sustainment as defined in the applicable IRD/ICD.

3.1.2.1.16   Automated Flight Plan Tracking (AFPT) Server

a)   The System must [2244] * interface with the AFPT server as defined in the applicable IRD/ICD.

3.1.2.1.17   Air Traffic Organization Operational Data Store (ATO ODS)

a)   The System must [2245] interface with the ATO ODS system as defined in the applicable IRD/ICD.

3.1.2.1.18   FAA Weather Camera Systems

a)   The System must [2246] interface with the Alaska Weather Camera System as defined in the applicable IRD/ICD.

3.1.2.1.19   Starcaster

a)   The System must [2247] interface with the Starcaster system as defined in the applicable IRD/ICD.

3.1.2.1.20 Remote Maintenance Monitoring (RMM)

a)   The System must [2248] * interface with the RMM system as defined in the applicable IRD/ICD.

3.1.2.1.21 Foreign Air Traffic Control (ATC)

a)   The System must [3065] interface with Foreign ATC as defined in the applicable IRD/ICD.

3.1.2.1.22 Advanced Technologies and Oceanic Procedures (ATOP)

a)   The System must [3066] interface with ATOP as defined in the applicable IRD/ICD.

3.1.2.2   Optional AFSM External Interfaces

Some data required for the System is available from multiple FAA-approved sources. The System may interface with the following sources to obtain this data.

3.1.2.2.1 AWOS Data Acquisition System (ADAS)

a)   The System may interface with ADAS as defined in the applicable IRD/ICD.

3.1.2.2.2 Automatic Dependent Surveillance-Broadcast (ADS-B)

a)   The System may interface with the ADS-B system as defined in the applicable IRD/ICD.

3.1.2.2.3 Automated Flight Following (AFF)

a)   The System may interface with the AFF system as defined in the applicable IRD/ICD.

3.1.2.2.4 Automated Surface Observation System (ASOS)

a)   The System may interface with ASOS as defined in the applicable IRD/ICD.

3.1.2.2.5 Aviation Weather Sensor System (AWSS)

a)   The System may interface with the Aviation Weather Sensor System as defined in the applicable IRD/ICD.

3.1.2.2.6 CAPSTONE

a)   The System may interface with CAPSTONE as defined in the applicable IRD/ICD.

3.1.2.2.7 Juneau Airport Wind System (JAWS)

a)   The System may interface with the JAWS as defined in the applicable IRD/ICD.

3.1.2.2.8 Micro En Route Automated Radar Tracking System (MEARTS)

a)   The System may interface with MEARTS as defined in the applicable IRD/ICD.

3.1.2.2.9 NAS Aeronautical Information Management Enterprise System (NAIMES)

a)   The System may interface with NAIMES as defined in the applicable IRD/ICD.

3.1.2.2.10 Next Generation Weather Radar (NEXRAD)

a) The System may interface with NEXRAD as defined in the applicable IRD/ICD.

3.1.2.2.11 National Oceanic and Atmospheric Administration (NOAA) Port

a) The System may interface with the NOAA Port as defined in the applicable IRD/ICD.

3.1.2.2.12 National Weather Service (NWS)

a) The System may interface with NWS as defined in the applicable IRD/ICD.

3.1.2.2.13 Special Use Airspace Management System (SAMS)

a) The System may interface with SAMS as defined in the applicable IRD/ICD.

3.1.2.2.14 Weather Information Network Server (WINS)

a) The System may interface with WINS as defined in the applicable IRD/ICD.

3.1.3 Major Components

See Statement of Work (SOW).

3.1.4 FAA and Government Furnished Information

Government Furnished Equipment (GFE) not applicable.

The AFSM SOW contains the list of Government Furnished Information (GFI).

3.1.5 System States and Modes

Individual flight service facilities operate in a specific facility state based upon the capabilities and services available at that AFSS/FSS. The entire System operates in three system modes based upon the states of the flight service facilities: Fully Operational Mode, Degraded Mode and Catastrophic Mode.

3.1.5.1 System States

In the System, each AFSS/FSS operates in one or more Facility States: Operational State, Partial State, Extended State, Maintenance State, Training State, Failed State and Closed State. These Facility States can apply to any AFSS/FSS and are not mutually exclusive, (i.e., an AFSS/FSS may be in the Partial State and Maintenance State at the same time).

3.1.5.1.1 System Capabilities

The System provides several core capabilities necessary to provide the Flight Services.

a) The System must [2249] provide a Weather Data Capability.

b) The System must [2250] provide a Flight Plan Data Capability.

c) The System must [2251] provide a NOTAM Data Transmit Capability.

d) The System must [2252] provide a Weather Observation Data Transmit Capability.

e) The System must [2253] provide a PIREP Transmit Capability.

f) The System must [2254] provide access to a Global System Database.

    1) The Global System Database must [2255] be accessible from all AFSS/FSSs.

    2) The System must [2256] provide physical redundancy for the Global System Database.

3) The Global System Database must [2257] contain data as described in Section 3.1.1.5, Data Management.

3.1.5.1.2 System Services

The System will support a number of specific flight services based on the System capabilities available.

a) The System must [2258] support Flight Services at each AFSS/FSS.

1) System Services must [2259] include Preflight Briefings.

a. The Preflight Briefing service must [2260] be provided when the Weather Data Capability, Flight Plan Data Capability and access to the Global System Database are present.

2) System Services must [2261] include Inflight Briefings.

a. The Inflight Briefings service must [2262] be provided when the Weather Data Capability, Flight Plan Data Capability and access to the Global System Database are present.

3) System Services must [2263] include Flight Plan Data processing.

a. The Flight Plan Data service must [2264] be provided when the Flight Plan Data Capability and access to the Global System Database are present.

4) System Services must [2265] include Search and Rescue operations.

a. The Search and Rescue service must [2266] be provided when the Flight Plan Data Capability and access to the Global System Database are present.

5) System Services must [2267] include NOTAM Transmit processing.

a. The NOTAM Transmit service must [2268] be provided when the NOTAM Data Transmit Capability and access to the Global System Database are present.

6) System Services must [2269] include Weather Observation Transmit processing.

a. The Weather Observation Transmit service must [2270] be provided when the Weather Observation Transmit Capability and access to the Global System Database are present.

7) System Services must [2271] include PIREP Transmit processing.

a. The PIREP Transmit service must [2272] be provided when the PIREP Transmit Capability and access to the Global System Database are present.

3.1.5.1.2.1 System Service Transfer

The System uses a Global System Database. When a specific System Service is unavailable at a specific AFSS/FSS, any other AFSS/FSS can access its facility-specific data. As a result, any AFSS/FSS can provide System Services for any other AFSS/FSS. The AFSS/FSS that takes on services for another is in the Extended State. The AFSS/FSS that has lost a service is in the Partial State.

Although all Flight Service facilities have access to all of the data in the Global System Database, the data is filtered so that only pertinent data for that specific AFSS/FSS is shown.

When a System Service is transferred, the filter at the Extended State AFSS/FSS is modified to show additional data for the newly added facility. In this way, the AFSS/FSS in the Extended State can 'mirror' the facility from which services were transferred.

When the System Service is transferred back to the original AFSS/FSS, the filter is modified to no longer show data for that facility.

a) The System must [2273] provide the capability to transfer System Services from one AFSS/FSS to another AFSS/FSS.

b) The System must [2274] provide the capability to transfer System Services from an MBO to an AFSS/FSS.

c) The System must [2275] provide the capability to filter data contained in the Global System Database by AFSS/FSS.

1) The System must [2276] provide the capability to modify the database filter for the entire AFSS/FSS.

2) The System must [2277] provide the capability to modify the database filter for an individual workstation.

3.1.5.1.3 System Facility States

Each Flight Service AFSS/FSS operates in one or more Facility States based on the System Services available.

a) An AFSS/FSS must [2278] be in the Operational State while all System Services are present and access to the Global System Database is available.

b) An AFSS/FSS must [2279] be in the Partial State while one or more System services are not present or access to the Global System Database is not available.

c) An AFSS/FSS must [2280] be in the Extended State while the facility has taken on one or more System Services for another facility.

d) An AFSS/FSS must [2281] be in the Failed State while no System Services are present and access to the Global System Database is not available.

e) An AFSS/FSS must [2282] be in the Closed State while it is not providing any System Services due to a configuration change (i.e., closed for the season).

f) An AFSS/FSS must [2283] be in the Maintenance State while maintenance is taking place at the facility.

g) An AFSS/FSS must [2284] be in the Training State while training is taking place at the facility.

3.1.5.2 System Modes

Based on the states of the individual AFSS/FSSs, the System operates in one of three modes: Fully Operational System Mode, Degraded System Mode, and Catastrophic System Mode.

3.1.5.2.1 Fully Operational System Mode

The Fully Operational System Mode is the primary mode for the System. In this mode, all of the available System AFSS/FSSs are in the Operational, Extended, Training or Closed State.

a) The System must [2285] be in Fully Operational System Mode while all AFSS/FSSs are in the Operational State, Extended State, Training State or Closed State and no facilities are in the Partial State, Maintenance State or Failed State.

3.1.5.2.2 Degraded System Mode

The Degraded System Mode occurs when any AFSS/FSS facility is in the Partial, Maintenance or Failed State.

a) The System must [2286] be in Degraded System Mode while any AFSS/FSS is in the Partial State.

b) The System must [2287] be in Degraded System Mode while any AFSS/FSS is in the Maintenance State.

c) The System must [2288] be in the Degraded System Mode while any AFSS/FSS is in the Failed State.

3.1.5.2.3 Catastrophic System Mode

The Catastrophic System Mode occurs when all AFSS/FSSs are either failed or closed.

a) The System must [2289] be in the Catastrophic System Mode while all AFSS/FSSs are in the Failed State or Closed State.

3.2 Performance

3.2.1 Operational Performance

3.2.1.1 Operational Safety

The AFSM program will follow the Safety Management guidance prescribed within the Safety Risk Management Guidance for System Acquisitions (SRMGSA). Specific details of the process are to be found therein. This section presents the definitions of the key elements of safety analysis that will be utilized within the AFSM program. These definitions will be necessary in defining the operational safety requirements for the AFSM program.

Safety is defined as freedom from unacceptable risk.

Risk is defined as the composite of predicted severity (worst credible outcome) when a hazard occurs and the likelihood of that outcome if a given hazard occurs.

Hazard is a condition that is a prerequisite to an accident or incident. It is a real or potential condition that can cause injury, illness, or death to people; damage to or loss of a system, equipment, or property; or damage to the environment.

The Hazard Severity definitions are as follows (Table 3 - 4 is referenced from SRMGSA).

Table 3-4 Severity Definitions

Effect On: ↓	Hazard Severity Classification				
	No Safety Effect	**Minor**	**Major**	**Hazardous**	**Catastrophic**
ATC Services	Conditions resulting in a minimal reduction in ATC services, or a loss of separation resulting in a Category D runway incursion1, or proximity event	Conditions resulting in a slight reduction in ATC services, or a loss of separation resulting in a Category C RI1, or Operational Error (OE)2	Conditions resulting in a partial loss of ATC services, or a loss of separation resulting in a Category B RI1, or OE2	Conditions resulting in a total loss of ATC services, (ATC Zero) or a loss of separation resulting in a Category A RI1 or OE2	Conditions resulting in a collision between aircraft, obstacles or terrain
Flight Crew	– Flight crew receives TCAS Traffic Advisory (TA) informing of nearby traffic, or, – PD where loss of airborne separation falls within the same parameters of a Category D OE 2 or proximity Event – Minimal effect on operation of aircraft	- Potential for Pilot Deviation (PD) due to TCAS Preventive Resolution Advisory (PRA) advising crew not to deviate from present vertical profile, or, -PD where loss of airborne separation falls within the same parameters of Category C (OE) 2 , or -Reduction of functional capability of	- PD due to response to TCAS Corrective Resolution Advisory (CRA) issued advising crew to take vertical action to avoid developing conflict with traffic, or, -PD where loss of airborne separation falls within the same parameters of a Category B OE 2, or, -Reduction in safety margin or	- Near mid-air collision (NMAC) results due to proximity of less than 500 feet from another aircraft or a report is filed by pilot or flight crew member that a collision hazard existed between two or more aircraft -Reduction in safety margin and functional capability of the aircraft requiring	- Conditions resulting in a mid-air collision (MAC) or impact with obstacle or terrain resulting in hull loss, multiple fatalities, or fatal injury

		aircraft but does not impact overall safety e.g. normal procedures as per AFM	functional capability of the aircraft, requiring crew to follow abnormal procedures as per AFM	crew to follow emergency procedures as per AFM	
Flying Public	– Minimal injury or discomfort to passenger(s)	– Physical discomfort to passenger(s) (e.g. extreme braking action; clear air turbulence causing unexpected movement of aircraft causing injuries to one or two passengers out of their seats) – Minor3 injury to greater than zero to less or equal to 10% of passengers	– Physical distress on passengers (e.g. abrupt evasive action; severe turbulence causing unexpected aircraft movements) – Minor3 injury to greater than 10% of passengers	Serious4 injury to passenger(s)	Fatalities, or fatal5 injury to passenger(s)

Likelihood (Probability) Definitions are as follows (Table 3 - 5 is referenced from the SRMGSA):

Table 3-5 Likelihood Definitions

	NAS Systems & ATC Operational	NAS Systems		ATC Operational		Flight Procedures
		Qualitative				
	Quantitative	**Individual Item/System**	**ATC Service/ NAS Level System**	**Per Facility**	**NAS-wide**	
Frequent A	Probability of occurrence per operation/operational hour is equal to or greater than 1×10^{-3}	Expected to occur about once every 3 months for an item	Continuously experienced in the system	Expected to occur more than once per week	Expected to occur more than every 1-2 days	Probability of occurrence per operation/operational hour is equal to or greater than 1×10^{-5}
Probable B	Probability of occurrence per operation/operational hour is less than 1×10^{-3}, but equal to or greater than 1×10^{-5}	Expected to occur about once per year for an item	Expected to occur frequently in the system	Expected to occur about once every month	Expected to occur about several times per month	
Remote C	Probability of occurrence per operation/operational hour is less than or equal to 1×10^{-5} but equal to or greater than 1×10^{-7}	Expected to occur several times in the life cycle of an item	Expected to occur numerous times in system life cycle	Expected to occur about once every year	Expected to occur about once every few months	Probability of occurrence per operation/operational hour is less than or equal to 1×10^{-5} but equal to or greater than 1×10^{-7}
Extremely Remote D	Probability of occurrence per operation/operational hour is less than or equal to 1×10^{-7} but equal to or greater than 1×10^{-9}	Unlikely to occur, but possible in an item's life cycle	Expected to occur several times in the system life cycle	Expected to occur about once every 10-100 years	Expected to occur about once every 3 years	Probability of occurrence per operation/operational hour is less than or equal to 1×10^{-7} but equal to or greater than 1×10^{-9}
Extremely Improbable E	Probability of occurrence per operation/operational hour is less than 1×10^{-9}	So unlikely that it can be assumed that it will not occur in an item's life cycle	Unlikely to occur, but possible in system life cycle	Expected to occur less than once every 100 years	Expected to occur less than once every 30 years	Probability of occurrence per operation/operational hour is less than 1×10^{-9}

3.2.1.2 Operational Safety Requirements

This section presents the operational safety requirements for the AFSM program. The requirements are presented in the form of a hazard. The requirement for each hazard is that the risk be acceptable to the FAA. Table 3 - 6 presents the Risk Matrix used by ATO within the FAA.

Table 3-6 SMS Risk Matrix

Severity \ Likelihood	No Safety Effect 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
Frequent A	Green	Yellow	Red	Red	Red
Probable B	Green	Yellow	Red	Red	Red
Remote C	Green	Green	Yellow	Red	Red
Extremely Remote D	Green	Green	Green	Yellow	Red
Extremely Improbable E	Green	Green	Green	Green	Yellow/Red *

High Risk
Medium Risk
Low Risk

* Unacceptable with Single Point and/or Common Cause Failures

The operational safety requirements:

a) The Risk associated with the loss of the System hardware and software components providing emergency services must [2290] be acceptable to the FAA.

b) The risk associated with the transmittal of erroneous or hazardously misleading emergency services information from the System must [2291] be acceptable to the FAA.

c) The risk associated with the loss of all flight service functions by the System due to power failure, the occurrence of a weather or natural disaster must [2292] be acceptable to the FAA.

d) The risk associated with the loss of the System hardware and software systems providing weather information processing and dissemination functions must [2293] be acceptable to the FAA.

e) The risk associated with the transmittal of erroneous or hazardously misleading weather information from a System or System web portal must [2294] be acceptable to the FAA.

f) The risk associated with the loss of the processing and disseminating system information for aeronautical information, e.g. NOTAMs, from System must [2295] be acceptable to the FAA.

g) The risk associated with the transmittal of erroneous or hazardously misleading aeronautical information, e.g. NOTAMs, from System or System Internet portal must [2296] be acceptable to the FAA.

h) The risk associated with the loss of System hardware and software providing special use airspace information functions must [2297] be acceptable to the FAA.

i) The risk associated with the loss of System hardware and software providing flight-planning functions must [2298] be acceptable to the FAA.

j) The risk associated with the loss of System hardware and software for filing flight plans must [2299] be acceptable to the FAA.

k) The risk associated with the loss of System hardware and software supporting the coordination of SAR must [2300] be acceptable to the FAA.

l) The risk associated with the transmittal of erroneous or hazardously misleading SAR information from System must [2301] be acceptable to the FAA.

m) The risk associated with the transmittal of erroneous or hazardously misleading airport advisory information from System must [2302] be acceptable to the FAA.

n) The risk associated with the transmittal of erroneous or misleading weather information from System to TWEB must [2303] be shown to be acceptable to the FAA.

o) The risk associated with the transmittal of erroneous or misleading weather information from System to TIBS must [2304] be acceptable to the FAA.

p) The risk associated with the transmittal of erroneous or hazardously misleading information via the System Internet portal must [2305] be acceptable to the FAA.

q) The risk associated with the loss of all flight service functions due to a AFSM Remote FSS power failure, or the occurrence of a weather or natural disaster must [2306] be acceptable to the FAA.

r) The risk associated with the loss of TIBS for broadcasting weather information must [2307] be acceptable to the FAA.

s) The risk associated with the loss of System processing and disseminating information for history recording must [2308] be acceptable to the FAA.

t) The risk associated with the System transmittal of erroneous or hazardously misleading information from history/recording must [2309] be acceptable to the FAA.

u) The risk associated with the loss of System processing and disseminating information system for airport advisory information must [2310] be acceptable to the FAA.

3.2.1.3 Fail-Safe

a) The System equipment failures must [2311] prevent safety hazards to personnel and be in accordance with the fail-safe definition as specified in FAA-G-2100H, 6.2.4.

b) The System equipment must [2312] be in accordance with fail-safe requirements as specified in the FAA Human Factors Design Standard Acquisition of Commercial-Off-The-Shelf, Non-Development, Developmental Systems DOT-FAA/CT/03-05, HF STD-001 (HFDS), Chapter 12, Section 12.4.1.5, Fail-Safe.

3.2.1.4 Operational Safety Human Factors

a) The System must [2313] follow the guidance of the HFDS, Section 2.

3.2.1.4.1 Consistency

a) The System must [2314] be designed to be consistent, appearing, behaving and responding the same throughout.

b) The System design must [2315] adhere to the same principles throughout with minimal variation.

3.2.1.4.2 Standardization

a) The System design must [2316] be standardized to the degree practical and compatible with system functions and purposes.

   1) Standardization refers to common user-interface features across multiple applications.[2998]

b) Standardized software addresses common functions that employ the same user dialogs, interfaces, and procedures.[2999]

3.2.1.4.3 User-Centered Perspective

a) The System design must [2317] focus on the needs and requirements of the end user throughout the design acquisition or development process.

   1) Provide useful, timely and informative feedback[3000].

   2) Provide predictable results to user actions.[3001]

   3) Use familiar terms and images.[3002]

   4) Design within user abilities.[3003]

   5) Design to meet user requirements.[3004]

   6) Design for the 5th to 95th percentile, at a minimum.[3005]

3.2.1.5 Operational Performance Response Times

a) The System must [2318] meet, as a minimum, the response times as listed in Appendix B – Performance Requirements.

3.2.2 Physical

This section defines the physical characteristics and limitations placed on the delivered System equipment and product.

3.2.2.1 General Physical Characteristics

a) The System and equipment must [2319] be in accordance with the physical requirements as specified in the HFDS, as applicable.

b) The System and equipment must [2320] be in accordance with the physical requirements as specified in the FAA-G-2100, as applicable.

c) The System must [2321] meet workmanship standards in accordance with MIL-HDBK-454, Guideline 9.

3.2.2.2 Design and Construction

a) The System must [2322] be in accordance with design requirements as specified in HFDS, Chapter 2, General Design.

b) The System must [2323] be in accordance with system equipment design and construction requirements as specified in the FAA-G-2100, Section 3.3, Equipment Design and Construction.

c) The System equipment must [2324] be constructed in accordance with mechanical construction requirements as specified in the FAA-G-2100, Section 3.1.2.3, Construction.

d) The System equipment and components must [2325] be in accordance with design requirements as specified in the HFDS, Chapter 10, Workstation and Workplace design, as applicable.

e) The System must [2326] be in accordance with maintenance design requirements as specified in HFDS, Section 4, Designing Equipment for Maintenance.

f) The System must [2327] be designed in accordance with electrical requirements as specified in the NFPA 70, National Electrical Code.

g) The System must [2328] be designed in accordance with electrical requirements as specified in the NFPA 70E, Standard for Electrical Safety in the Workplace.

h) The System must [3064] be designed in accordance with electrical requirements as specified in FAA Order 6950.2, Electrical Power Policy Implementation at National Airspace System Facilities.

3.2.2.3 Materials and Parts

a) The System materials must [2329] be in accordance with the materials requirements as specified in the FAA-G-2100, section 3.3.1.1.

b) The System parts must [2330] be in accordance with the mechanical parts requirements as specified in the FAA-G-2100, section 3.3.1.5.

c) The System electrical parts must [2331] be in accordance with the electrical parts requirements as specified in the FAA-G-2100, section 3.3.1.4.

3.2.2.4 Equipment Size

a) The System equipment and components must [2332] be physically compatible with existing GFE furniture and equipment on the Operations floor of each AFSS and FSS.

b) The System equipment and components must [2333] be physically compatible with existing GFE furniture and equipment in the Equipment room of each AFSS and FSS site.

c) The System workstation equipment must [2334] be designed to mount in the existing GFE console furniture of the Operations room at each AFSS and FSS. AFSS console dimensions are available as a Specification supplement document.

d) The System Rack assembly equipment must [2335] occupy a footprint of no more than 70 square feet for one rack space in the equipment room of each AFSS, including front and rear access to equipment closures.

e) The System Rack assembly equipment must [2336] occupy a physical floor space of no more than 70 square feet for one rack space at each FSS site, including front and rear access to equipment closures.

f) The System Rack assembly equipment must [2337] occupy a physical floor space of no more than 70 square feet for one rack space at Anchorage Air Route Traffic Control Center (ZAN), including front and rear access to equipment closures.

g) The height of the System equipment, mounted in equipment racks, must [2338] be 72 inches or less.

h) The System printer must [2339] occupy a physical space that is compatible with existing GFE furniture and be accommodated by a standard office worktable at each AFSS and FSS site.

i) The System facsimile server must [2340] occupy a physical space that is compatible with existing GFE furniture and be accommodated by a standard office worktable at each AFSS and FSS site.

j) The System scanner must [2341] occupy a physical space that is compatible with existing GFE furniture and be accommodated by a standard office worktable at each AFSS and FSS site.

k) The System flight progress strip workstation component must [2342] occupy a physical space that is compatible with existing GFE furniture in the Operations room of each AFSS and FSS site.

l) The System design must [2343] ensure sufficient space for movement and actions required during operational and maintenance tasks.

3.2.2.5 Weight

a) The System equipment must [2344] be in accordance with the weight requirements specified in FAA-G-2100H, section 3.3.6.3.

b) The System equipment and system components must [2345] be in accordance with weight requirements as specified in HFDS, Section 4.2.2.

3.2.2.6 Color and Finish

a) The System color and finish must [2346] be in accordance with the FAA-G-2100, section 3.3.1.3.2.

b) The System color must [2347] be in compliance with FAA-STD-001B-76, Color and Texture of Finishes for National Airspace System (NAS) Equipment.

c) The System exposed surfaces must [2348] be finished to resist wear and scuffing.

d) The System equipment surfaces must [2349] be easily cleaned.

e) The System surfaces must [2350] be free of rough, ragged, or sharp protrusions.

3.2.2.7 Labeling

a) The System equipment labeling and redundant subsystem hardware configurations must [2351] be in accordance with labeling requirements as specified in the HFDS, Section 6.2.5, Labeling and Marking.

b) The System equipment must [2352] be in accordance with labeling requirements as specified in 3.3.6.5.

c) When multiple switches are assembled together in a rack, the vendor must [2353] provide additional identification labels to provide guidance for maintenance personnel.

3.2.2.8 Accessibility

a) The System must [2354] be in accordance with accessibility requirements as specified in FAA-G-2100, sections 3.1.1.1 and 3.1.2.4, and all associated subsections.

3.2.2.9 Loading and Installation

The fixed installation and physical dimensions of the existing consoles and GFE furniture determine monitor mounting characteristics and installation of AFSM Automation System equipment in the Operations Room and Equipment room of each AFSS and FSS

a) The structural strength and rigidity of the System equipment must [2355] be such that normal handling in loading, shipping, unloading, and setting into position for installation does not result in any damage to the equipment.

b) The loading conditions of each fully equipped System component must [2356] be less than or equal to an average of weight distribution of 125lbs per square foot.

c) The System components must [2357] be designed in accordance with installation requirements as specified in the FAA-G-2100, Section 3.1.2.2.

d) The mounting of System components must [2358] be in accordance with applicable state and local building codes.

e) The AFSM Automation System installation must [2359] be designed to comply with National Electric Code, NFPA 70.

f) The AFSM Rack Assembly must [2360] be installed on GFE furniture located in the Equipment room of the AFSS sites.

g) The existing AFSS consoles must [2361] be utilized to accommodate AFSM workstation equipment without interfering with or affecting existing systems, AFSS instrumentation, and other equipment currently located in the consoles but not being replaced by the AFSM Automation System.

3.2.2.10 Handling

a) No removable component of the System must [2362] exceed the weight lifting requirements of FAA-G-2100, section 3.3.6.3, for male and female handling, unless the system provides mechanical devices for all necessary handling.

b) The System equipment that is to be manually handled must [2363] be in accordance with the handling requirement specified in HFDS, Section 4.2, Designing Equipment for handling.

c) The System equipment components requiring lifting, removal, carrying or handling must [2364] be in accordance with Handle requirements as specified in the HFDS, Section 4.2.5, Handles.

3.2.2.11 Space Allocation

a) The System positioning must [2365] be in accordance with the HFDS, Chapter 4, Section 4.3.4, Positioning Equipment.

b) The System equipment physical layout must [2366] be in accordance with equipment access and safety dimensions in accordance with NFPA 70.

3.2.2.12 Structural and Seismic Stability

a) The System components and equipment must [2367] be in accordance with seismic requirements as specified in FAA-G-2100, section 3.2.1.1 and 3.3.5.

3.2.2.13 Grounding, Bonding, Shielding, and Lightning Protection

a) The System must [2368] be in accordance with the FAA-Standard-020, Transient Protection Grounding, Bonding, and Shielding Requirements for Equipment, as applicable.

b) The System must [2369] be in accordance with the FAA-Standard-019, Lightning, Protection, Grounding, Bonding, and Shielding for Facilities, as applicable.

3.2.3 Reliability/Availability

3.2.3.1 Reliability

a) The System must [2370] have a Mean-Time-Between-Failures (MTBF) of no less than 5000 hours.

b) All redundant hardware or software in the System must [2371] automatically switchover from a failed element to the redundant element.

3.2.3.2 Availability

a) The System operational availability (Ao) must [2372] be ≥ 0.999.

b) The System must [2373] have no single point of failures for components that are critical to providing flight services.

3.2.4 Maintainability

3.2.4.1 Reliability Centered Maintenance

a) System reliability centered maintenance must [2374] prohibit interruption of flight services.

3.2.4.2 Maintainability Functional Requirements

a) The System must [2375] have the capability to automatically diagnose system/site faults.

b) The System must [2376] have the capability to identify failures to Lowest Replaceable Unit (LRU).

c) The System must [2377] allow replacement of failed LRU without affecting operations.

d) The System must be available for operational use during routine tasks such as:

1) Maintenance (i.e. software loads, database load, configuration management)[2378]
2) Hardware diagnostics[3006]
3) Software diagnostics[3007]
4) Certification testing[3008]
5) Training[3009]

e) The System must [2379] provide the capability to display and report the current/real time system/site status (i.e. software, hardware, database, communication lines).

f) The System must [2380] provide the capability for the local user to initiate, report, and monitor diagnostics at an AFSM local facility.

g) The System must [2381] provide the capability for a remote user to initiate, report, and monitor diagnostics at an AFSM facility or component at an AFSM facility.

3.2.4.3 First Level Maintenance Requirements

a) All key performance parameters, functions, processes, or products that need to be verified in order to ensure the system is fully operational must [2382] be identified and displayed on the maintenance workstation.

b) Any verifications or checks that should be performed on a recurring basis to ensure system integrity must [2383] be identified and the procedures established for accomplishing those checks.

c) Any verifications or checks that should be performed on a recurring basis to ensure system performance must [2384] be identified and the procedures established for accomplishing those checks.

d) Status, performance, error alerts and alarms must [2385] be recorded and stored for retrieval during troubleshooting and analysis activities.

e) Any test equipment required for 1st level maintenance at a site must [2386] be provided with the system for each site.

f) The 1st level maintenance must [2387] have the capability to drill down on any component or communication pathway in the System and to obtain real-time status, diagnostic and configuration information on that component or communication pathway.

g) Real-time monitoring of all System network services (SMTP, POP3, HTTP, NNTP, PING, etc.)/communications/communication lines/configurations/addresses/status/problem history must [2388] be made available to the 1st level maintenance organization via the System.

3.2.4.3.1 Maintenance Workstation

a) Two AFSM maintenance workstations must [2389] be installed at ZAN, Anchorage ARTCC.

b) An AFSM deployable 'hot' spare maintenance workstation must [2390] be installed at ZAN, Anchorage ARTCC for deployment to AFSS sites.

c) An AFSM maintenance workstation must [2391] be installed at each AFSS.

d) AFSM maintenance capabilities must [2392] be available at each workstation.

e)   Maintenance workstations must [3061] * provide RMM services in accordance with the current version of 6000.30, NAS Maintenance Policy.

f)   The maintenance workstation must [2393] provide the ability to verify the status of the System components.

g)   The maintenance workstation must [2394] provide monitoring of the states and modes of the AFSM Automation System.

h)   The maintenance workstation display must graphically group the status indicators as follows:

   1)   Kenai AFSS[2395]

      a.   Cold Bay FSS[3010]
      b.   Dillingham FSS[3011]
      c.   Homer FSS[3012]
      d.   Iliamna FSS[3013]
      e.   McGrath FSS[3014]
      f.   Palmer FSS[3015]
      g.   Talkeetna FSS[3016]

   2)   Fairbanks AFSS[3017]

      a.   Barrow FSS[3018]
      b.   Nome FSS[3019]
      c.   Northway FSS[3020]
      d.   Kotzebue FSS[3021]
      e.   Deadhorse FSS[3022]

   3)   Juneau AFSS[3023]

      a.   Ketchikan FSS[3024]
      b.   Sitka FSS[3025]

   4)   ZAN[3026]

i)   The maintenance workstation must [2396] verify the status and connectivity of any devices networked to the AFSM Automation system.

j)   The maintenance workstation must [2397] provide the capability to run diagnostics, perform troubleshooting and fault isolation down to the LRU.

k)   The maintenance workstation must [2398] provide the capability to analyze system performance.

l)   The maintenance workstation must [2399] display actual values of key performance parameters.

m)   The maintenance workstation must [2400] display minimum and maximum acceptable values.

n)   The maintenance workstation must [2401] monitor the status of critical system processes.

o)   The maintenance workstation must [2402] monitor the status of key system functions.

p)   The maintenance workstation must [2403] manage system configuration.

q) The maintenance workstation must [2404] monitor bandwidth usage.

r) The maintenance workstation must [2405] verify the presence of data provided by all defined external interfaces.

s) The maintenance workstation must [2406] provide the capability to reset or initialize any AFSM Automation system component as permitted by the user's authorization.

t) The maintenance workstation must [2407] provide the capability to perform periodic maintenance.

u) The maintenance workstation must [2408] provide the capability to perform certifications.

v) The maintenance workstation must [2409] display system status, performance, error alerts and alarms.

3.2.4.3.2 Remote Maintenance Monitoring (RMM)

a) The System must [2410] * provide RMM capability in accordance with JO 6000.53.

b) The System RMM capability must [2411] * provide overall system status – up, degraded, or failed.

c) The System RMM capability must [2412] * provide network status – connectivity to networked devices.

d) The System RMM capability must [2413] * provide device status – status of individual devices such as workstations, routers, and switches.

e) The System must [2414] * authorize remotely executed maintenance and diagnostic activities.

f) The System must [2415] * monitor and control executed maintenance and diagnostic activities.

g) When remote maintenance is completed, the System must [2416] * terminate all maintenance sessions and remote connections invoked in the performance of that activity.

3.2.4.3.3 Service Operations Center (SOC)

a) The System must [2417] provide electronic notification to the SOC.

b) The System must [2418] send an electronic alarm and/or notification of any failure from the AFSM Automation System with the identification of the location of that failure to the SOC.

3.2.4.4 Second Level Maintenance Requirements

3.2.4.4.1 Maintenance Support System

a) The FAA second level support system must [2419] contain all the fielded hardware, software and databases, including all associated redundancy, four remote systems, any support systems and hardware.

b) The FAA second level support system must [2420] be designed to have the capability to receive all real-time live unprocessed data (including but not limited to: weather data (alpha-numerical/graphic), NOTAM data, aeronautical information data, StarCaster

data, FAA weather camera data, etc) from a spilt feed off of the live System. (Note: This split feed will have zero impact on the live System and its associated communications pathways.)

c) The FAA second level support system must [2421] have the capability to log-on and monitor any AFSM field site and its associated communication pathways.

d) The FAA second level support system must [2422] have the capability to drill down on any component or communication pathway in the AFSM fielded System and to obtain real-time status, diagnostic and configuration information on that component or communication pathway.

e) The FAA second level support system must [2423] have the capability to electronically deliver software and database updates to each AFSM field sites with zero impact to the live System and its associated communications pathways. Note: These updates will only be loaded when the field sites issue the appropriate commands.

f) The FAA second level support system must [2424] have a built in simulator that can generate a full peak hour traffic/load and a full peak traffic/day load for the entire System.

g) The FAA second level support system must [2425] have all the COTS and non-COTS software necessary to build, maintain, configuration manage and test the AFSM software and databases.

h) All protocol analyzers utilized as a part of the System must [2426] be delivered as part of the FAA second level support system.

3.2.4.4.2 Configuration Management

a) The System must [2427] have an automated process to record the status and history of all items under configuration control.

b) The System must [2428] have an automated process to record, document and track all configuration management activities.

c) The System must [2429] upon request generate an automated report on the contents of the baseline library.

3.2.4.4.3 Maintenance Support of Software and Databases

a) The System must [2430] provide the capability to maintain AFSM databases online through a secure remote access.

   1) Online database maintenance must [2431] be restricted to privileged users.

   2) Online database maintenance must [2432] allow modification of all static data files.

   3) The System must [2433] electronically track database modifications made online.

      a. The System must [2434] record the date and time of the online database modification.

      b. The System must [2435] record the user information for the online database modification.

      c. The System must [2436] record the IP address for the online database modification.

   d. The System must [2437] record the reason for the online database modification.

  4) The System must [2438] provide the capability to preserve online database modifications after a 56-day database update.

    a. The System must [2439] display each database modification that was made online after a specified date.

     1. The System must [2440] display the corresponding data contained in the new 56-day update.

    b. The System must [2441] provide the user with the option to accept or decline each online database modification.

     1. If the user chooses to accept the online database modification, the System must [2442] override the new 56-day update database data with the corresponding online data change.

     2. If the user chooses to decline the modification made online, the System must [2443] retain the new 56-day update data.

b) The System must [2444] ensure that all AFSM data remains synchronized after each software and database update.

  1) The System must [2445] ensure that all database schema changes are replicated throughout all related database structures in the database(s) and application software.

  2) The System must [2446] ensure that all modifications made to the AFSM database(s) are replicated throughout all other related and duplicated AFSM database(s).

  3) The System must [2447] ensure that upon database and software updates, all embedded links and file references remain valid.

  4) The System must [2448] provide data conversion tools to import existing data when database schemas are modified

c) The System must [2449] allow the loading of a database update without also loading a corresponding software update.

d) The System must [2450] allow the loading of a software update without also loading a corresponding database update.

e) The System must [2451] provide the capability to search source code for modifications contained in a software update.

  1) The search must [2452] return source code modules that were modified for the software update.

  2) The search must [2453] return lines of source code that were modified for the software update.

f) The System must [2454] provide the capability to search the system for executable files that were modified in a software update.

g) The System must [2455] provide the capability to search the database for modifications contained in a database update.

    1) The search must [2456] return database schemas that were modified for the database update.

    2) The search must [2457] return static data that was modified for the database update.

h) The System must [2458] provide a verification report that tracks changes for each software update.

    1) The verification report must [2459] indicate the source code modules that were modified for the software update.

    2) The verification report must [2460] indicate the purpose for each source code module modification.

    3) The verification report must [2461] indicate the specific user that modified each source code module.

    4) The verification report must [2462] indicate the corresponding executable file(s) affected by each source code module modification

i) The System must [2463] provide a verification report that tracks changes for each database update.

    1) The verification report must [2464] indicate the database schemas that were modified for the database update.

    2) The verification report must [2465] indicate the static data that was modified for the database update.

    3) The verification report must [2466] indicate the purpose for each database modification.

    4) The verification report must [2467] indicate the specific user that performed each database modification.

j) The System must [2468] provide a search engine to compare changes between software versions.

    1) The search must [2469] indicate the executable files that differ between the software versions.

k) The System must [2470] provide a search engine to compare changes between database versions.

    1) The search must [2471] indicate database schemas that differ between the database versions.

    2) The search must [2472] indicate static data that differs between the database versions.

l) The System must [2473] provide a search engine that can search for any string of data throughout the software source code.

    1) The search engine must [2474] allow wildcards that match any character.

    2) The search engine must [2475] search source code for the System application software.

    3) The search engine must [2476] search source code for System tools.

m) The System must [2477] provide a search engine that can search for any string of data throughout the AFSM database and file system.

    1) The search engine must [2478] allow wildcards that match any character.

    2) The search engine must [2479] search the AFSM database.

    3) The search engine must [2480] search text files contained on the System.

n) All System developmental software must [2481] be under configuration control until the product baseline is established.

o) The System must [2482] provide compatibility for upgrades to the developed software components, COTS software packages, AFSM database and operating system.

p) The System must [2483] provide the capability to restore the current software and database baseline in a single user action.

q) The System must [2484] fall back the software with one command in a time frame of no more than 1 minute.

r) The System must [2485] fall forward the software with one command in a time frame of no more than 1 minute.

s) The System must [2486] fall back the database with one command in a time frame of no more than 1 minute.

t) The System must [2487] fall forward the database with one command in a time frame of no more than 1 minute.

u) The System must [2488] ensure database integrity.

    1) The System must [2489] provide tools to monitor and maintain database integrity.

        a. The database integrity tools must [2490] prevent data corruption by identifying and reporting database errors.

        b. The database integrity tools must [2491] identify a set of preferred repairs if database corruption is detected.

v) Common Support Equipment requirements to assist in the fault isolation and repair of designated LRUs/assemblies must [2492] be developed for the System.

w) The system developmental software must [2493] be fully documented and commented IAW the current version of FAA-STD-026, Software Development for the National Airspace System or industry standard that is acceptable to the FAA.

x) The system software must [2494] be controlled and maintained using a software control tool.

y) The System must [2495] have an automated database tool that has customizable features that allows the user to identify items that are accounted for in the database but have not been received via the system's interfaces for a specified time period back to one calendar year.

3.2.4.4.4 Monitoring and Control

a) The System must [2496] have the capability to automatically diagnose the cause of system faults electronically, via hard copy, and with the ability to migrate that data into a second level support computer system.

b) The System must [2497] contain all system diagnostic/monitoring tools.

c) The System must [2498] provide error tracking in plain language reports.

   1) The System must [2499] automatically generate step by step procedures to fix the errors or logical group of errors and this data will migrate into the FAA second level support System on a regular basis.

d) Real-time monitoring of all System equipment/hardware (residing on the live and test systems) must [2500] be made available to the FAA second level support organization via the second level support System.

e) Real-time monitoring of all System processes (residing on the live and test systems) and host resources (processor load, disk and memory usage, running processes, log files, etc.) must [2501] be made available to the FAA second level support organization via the second level support System.

f) Real-time monitoring of all System databases (contained on the live and test systems) must [2502] be made available to the FAA second level support organization via the second level support system.

g) Real-time monitoring of all System network services (SMTP, POP3, HTTP, NNTP, PING, etc.)/communications/communication lines/configurations/addresses/status/problem history (residing on the live and test systems) must [2503] be made available to the FAA second level support organization via the second level support System.

3.2.4.4.5 Test Tools

a) All COTS and non-COTS software and databases used to automate the test scripts must [2504] be delivered as part of the FAA second level support system.

b) Detailed engineering data for the components used to support the System must [2505] be developed and include all test files created in the development of each test program, including any special component libraries.

c) Automated test scripts for each baseline requirement that provides detailed reports, graphs and artifacts must [2506] be developed as part of the System.

d) The automated test cases must [2507] be developed to establish and manage requirements traceability.

e) The automated test cases must [2508] be developed to ensure that requirements are linked to test cases, ensuring proper test coverage.

f) The automated test cases must [2509] be developed to report any suspicion analysis to ensure that when a requirement changes that test cases traced to the requirement are automatically flagged as possible candidates for modification.

g) Automated test scripts for the System software and databases must [2510] be developed that can run independently on the System without user intervention.

h) The automated test tool must [2511] contain the capability to coordinate, schedule, run and store the results of any software and database testing.

i) The automated test tool must [2512] contain a built-in, customizable error-recovery system which will return the FAA AFSM second level support system to pre-failure state and resume testing.

j)   The automated test tool must [2513] have enhanced management capabilities that support a mature and complete functional and regression testing process of the AFSM software and databases.

k)   The automated test tool must [2514] have an animated run mode to provide 'slow motion' playback of all test scripts.

l)   Automated test scripts must [2515] be developed and delivered with the system to conduct unit tests to determine whether various sections of the code are acting as required under various circumstances.

m)   Automated test cases must [2516] be developed to verify that the software runs as defined in the requirements.

n)   The automated test tool must [2517] have customizable test management features that allow users to build support for new test inputs (e.g. system requirements from a third-party tool) and test types (e.g. home-grown unit tests).

o)   The automated test tool must [2518] support local, remote and parallel test execution.

p)   The automated test tool must [2519] be updated to incorporate all changes contained in software and database updates.

3.2.5   Recovery

3.2.5.1   Recovery From Power Reset of the System

a)   The System must [2520] recover to full service in less than 15 minutes after restoration of electrical power to the normal operational mode.

b)   The System must [2521] automatically check the integrity of all databases prior to bringing the system back up to full service after reset of system power.

c)   The System must [2522] be able to recover all communications after a power reset.

3.2.5.2   Recovery from a system reset

a)   The System must [2523] recover to full service in less than 15 minutes from a full system reset defined as a system restart, without the loss of power.

b)   The System must [2524] provide a means to check the integrity of all databases.

c)   The System must [2525] be able to recover all communications after a system reset.

3.2.5.3   Recovery of essential data

a)   After a failure or system reset, the System must [2526] recover all data on the Proposed List, Inbound List, and Suspense List.

b)   After a failure or system reset, the System must [2527] recover weather and aeronautical databases, the flight plan database, and historically recorded database.

c)   After a data communication loss, the System must [2528] recover A/N weather data, graphical weather data, aeronautical data, and NOTAM data.

d)   The System must [2529] provide a method to recover all databases should the databases be corrupted by operations or application fault.

e)   The System must [2530] recover from a disk storage device failure.

3.2.6 Reserve

a) System/site processing capacity must [2531] contain reserve processing capacity so that the mean use over any 5-minute interval is no more than 50 % of the maximum processing capacity.

b) System/site Memory Use must [2532] contain reserve memory capacity so that memory use does not exceed 50 % of the maximum memory capacity.

c) System/site Storage Use must [2533] contain on-line reserve storage capacity so that the storage use within the site does not exceed 50 % of the maximum on-line storage capacity.

3.2.7 Portability

a) The SVCA software application must [2534] be portable to an industry-standard server.

b) The SVCB messaging software application must [2535] be portable to an industry-standard server.

c) Software processes must [2536] be written in industry standard programming language.

d) Software processes must [2537] be modular in nature to reduce interdependency.

3.2.8 Environments

The System Environment Requirements section covers the environmental characteristics of the AFSS and the FSS Equipment Room Components, Operations Room Components and External Equipment.

3.2.8.1 General Environment Characteristics

a) The System operating environment must [2538] be in accordance with FAA-G-2100, section 3.2.1, Environment Conditions as applicable.

b) The System components must [2539] be in accordance with Environment requirements as specified in the HFDS Chapter 13, as applicable.

c) The System environment must [2540] be in accordance with FAA Order 1050.10, Prevention, Control and Abatement of Environmental Pollution at FAA Facilities.

d) The System environment must [2541] operate in accordance with the requirements of Federal Communications Commission (FCC) Class A, (47 CFR Part 15) or better.

e) The System environment must [2542] meet the requirements specified in FAA-G-2100, section 3.3.2 Electromagnetic Compatibility, as they relate to hardware emissions and susceptibility.

3.2.8.2 Environmental Characteristics of the AFSS/FSS Equipment Room System Components

a) The System components must [2543] operate at an altitude of up to 2.5 km (8,000 feet) above sea level.

b) The System components must [2544] operate within the temperature range of 10 °C to 35 °C (50 °F to 95 °F).

c) The System components must [2545] operate in a relative humidity of 20% to 80%, without condensing.

d) The System components must [2546] survive a non-operating altitude of up to 3.0 km (10,000 feet) above sea level.

e) The System components must [2547] survive a non-operating temperature range of 0 °C to40°C (32 °F to 104 °F).

f) The System components must [2548] survive a non-operating relative humidity range of 10% to 80% without condensing.

3.2.8.3 Environmental Characteristics of the AFSS/FSS Operations Room System Components

a) The System components must [2549] operate at an altitude of up to 3.0 km (10,000 feet) above sea level.

b) The System components must [2550] operate within the temperature range of 0 °C to 40 °C (32 °F to 104 °F).

c) The System components must [2551] operate in a relative humidity of 10% to 80%, without condensing.

d) The System components must [2552] survive a non-operating temperature range of 5 °C to 35 °C (41 °F to 95 °F).

e) The System components must [2553] survive a non-operating relative humidity range of 15% to 80%, without condensing.

3.3 System Characteristics

3.3.1 Safety

This section contains safety requirements that go beyond the performance values listed in Section 3.2, and includes personnel safety relative to the handling and operations of the system.

3.3.1.1 Personnel Safety

a) The System must [2554] be in accordance with Personnel Safety and Health requirements specified in FAA-G-2100, section 3.3.5, and all associated subsections.

b) The System must [2555] be in accordance with personnel safety requirements as specified in 29 CFR 1910, Occupational Safety and Health Standards (OSHA).

c) The System must [2556] be in accordance with FAA Order 3900.19, FAA Occupational Safety and Health Program.

d) The System must [2557] contain no hazardous or restricted materials, as defined by MIL-HDBK-454, Guideline 1, and Safety Design Criteria – Personnel Hazards.

e) The System must [2558] contain safety features and ensure physical safety in accordance with UL 1950, as applicable.

f) The System must [2559] contain safety features in accordance with the FAA System Safety Handbook.

g) The System must [2560] be in accordance with Personnel Safety requirements as specified in the HFDS, as applicable.

3.3.1.2 Electrical Safety

a) The System must [2561] ensure Electrical safety in accordance with UL 1950, Section 2.

b) The System must [2562] be in compliance with electrical hazards as specified in MIL-STD-1472, Hazards and Safety – Electrical Hazards.

c) The System must [2563] be in accordance with the Electrical hazards requirements as specified in the HFDS, Section 12.4, Electrical Hazards.

d) The System must [2564] be in accordance with Electrical Safety requirements as specified in FAA-G-2100, Section 3.3.5.1, Electrical Safety.

3.3.1.3 System Equipment –Related Personnel Safety

a) The System must [2565] be in accordance with Equipment-related safety requirements as specified in the HFDS, Section 12.3, Equipment-related Safety.

b) The System must [2566] ensure maintenance procedure user protection in accordance with the HFDS, Section 4.1.2.6, Designing for Safety of Users.

c) The System must [2567] be in accordance with Mechanical Hazards requirements as specified in FAA-G-2100, 3.3.5.4.

d) The System equipment must [2568] ensure personnel safety during seismic events in accordance with FAA-G-2100, 3.3.5.7, Seismic Safety.

e) The System must [2569] be in accordance with other applicable requirements as specified in FAA-G-2100, section 3.3, Equipment Design and Construction.

3.3.1.4 Thermal Contact Hazards

a) The System must [2570] be in compliance with thermal contact hazards as specified in MIL-STD-1472, Hazards and Safety – Thermal Contact Hazards

3.3.1.5 Physical Hazards

a) The System must [2571] be in accordance with Physical Hazards requirements as specified in the HFDS, Section 12.5, Physical Hazards.

b) The System equipment Physical hazards must [2572] be marked in accordance with FAA-G-2100, 3.3.5.5.1d.

3.3.1.6 Liquid and Gas Hazards

a) The System must [2573] be in compliance with liquid and gas hazards in accordance with the HFDS, Chapter 12.6, Liquid and Gas Hazards.

b) The System must [2574] be in accordance with explosion and implosion hazard protection requirements as specified in the HFDS, Chapter 12.13, Explosion and Implosion Hazards.

c) The System must [2575] be in compliance with hazardous gases as specified in FAA-G-2100, section 3.3.5.6.2, Dusts, Mists, Fumes, and Gases.

3.3.1.7 Toxic Hazards

a) The System must [2576] be in compliance with and be free of toxic hazards in accordance with the HFDS, Chapter 12.7, Toxic Hazards.

3.3.1.8 Radiation Hazards

a) The System must [2577] be in compliance with and be free of radiation hazards in accordance with the HFDS, Chapter 12.8, Radiation Hazards.

b) The System must [2578] be in accordance with user protection requirements as specified in FAA-G-2100, 3.3.5.6.4, Radioactive Materials.

3.3.1.9 Protection from Special Chemicals

a) The System must [2579] be in compliance with special chemicals in accordance with the HFDS, Chapter 12.9, Protection from Special Chemicals.

3.3.1.10 Temperature Hazards

a) The System must [2580] be in compliance with temperature hazards in accordance with the HFDS, Chapter 12.10, Temperature Hazards.

3.3.1.11 Fire Protection

a) The System must [2581] be in accordance with the National Fire Protection Association Standard 70 National Electrical Code (NFPA 70).

b) The System must [2582] be in accordance with fire protection requirements as specified in the HFDS, Section 12.11, Fire Protection.

3.3.1.12 Noise Hazards

a) The System must [2583] be in accordance with noise hazard requirements as specified in the HFDS, Section 12.12, Noise Hazards.

b) The System must [2584] be in accordance with noise hazard identification requirements as specified in FAA-G-2100, section 3.3.6.1.1.

c) The System must [2585] be in accordance with occupational noise exposure requirements in 29 CFR 1910.95.

3.3.1.13 Labeling and Markings

a) To ensure the safety of users, maintainers, and equipment, the System equipment configuration and operational aspects that are critical to performance and personnel safety must [2586] be labeled or marked.

b) The System must [2587] be in accordance with labeling requirements critical to personnel safety as specified in FAA-G-2100, section 3.3.6.5.

c) The System must [2588] be in accordance with accident prevention signs and labels requirements as specified in FAA-G-2100, section 3.3.5.5.2a.

d) The System must [2589] be in accordance with labeling requirements as specified in the HFDS, Section 12.16, Safety Labels and Placards.

3.3.2   Security

3.3.2.1   General Security

The System has inherent security risks and, upon its deployment, may introduce increased security risks into the NAS and NAS security.

a) The System must [2590] ensure that appropriate security requirements (technical, operational, and management controls) are taken to mitigate risks to the System and other NAS elements to an acceptable level based upon a security risk assessment.

1) The System must:

      a.   Receive electronic signatures from users indicating that they have read, understand, and agree to abide by the rules of behavior, before authorizing access[3027]

      b.   Store active electronic signatures of agreement in an archive for the life of the system[3028]

      c.   Make data available upon request[3029]

  2)   For interface to networks based on X.25 and Aeronautical Telecommunication Network (ATN) protocols, the System must [2591] be designed and implemented using security engineering principles in accordance with FAA Standard FAA-STD-045, National Airspace System (NAS) Open Systems Interconnection Security Architecture, Protocols and Mechanisms.

  3)   The Vendor must [2592] allow the FAA the capability to scan the System for vulnerabilities.

b)   The System security controls must [2593] be non-disruptive to ATC operations.

  1)   The Vendor must [2594] provide system resources necessary to establish an alternate processing site.

  2)   The alternate processing site of the System must [2595] be geographically separated from the primary processing site so as not to be susceptible to the same hazards.

  3)   The Vendor must [2596] protect backup information at an appropriately secured location.

  4)   The Vendor must [2597] test backup information monthly to ensure media reliability and information integrity.

  5)   The System must [2598] protect System backup information from unauthorized modification.

c)   The System architecture must [2599] adhere to the FAA Information System Security Architecture current approved version.

d)   The System security policies must [2600] comply with the 44 United States Code (U.S.C.), Federal Information System Security Act.

e)   The System security policies must [2601] comply with FAA Order 1370.82, Information System Security Program.

  1)   The System must [2602] monitor the System security controls continuously.

3.3.2.2 Physical Security

a)   The Vendor must [2603] segregate interface equipment for encrypting data communications to computer equipment performing air traffic functions.

  1)   The Vendor must [2604] separate user functionality (including user interface services) from System management functionality.

3.3.2.3 Information System Security

3.3.2.3.1 System Integrity

a)   The System must [2605] be protected from threats to integrity.

1) The System must [2606] protect the integrity of transmitted information.

2) The Vendor must [2607] protect the integrity of the publicly available information and applications.

3) For Security Sensitive Information (SSI), the system must [2608] follow FAA-OR-1600.75, Protecting Sensitive Unclassified Information (SUI).

3.3.2.3.2 Availability

a) The System must [2609] be protected from threats to availability.

b) The Vendor must [2610] protect assets from denial of service.

c) The Vendor must [2611] protect assets from unacceptable degradation of service.

d) The Vendor must [2612] protect the availability of the publicly available information and applications.

3.3.2.3.3 Confidentiality

a) The Vendor must [2613] provide for information system confidentiality based upon a risk assessment.

1) The Vendor must [2614] protect the confidentiality of transmitted information.

2) When cryptography is required and employed within the System, the Vendor must [2615] establish and manage cryptographic credentials using automated mechanisms with supporting procedures and manual procedures.

3) For information requiring cryptographic protection, the Vendor must [2616] implement cryptographic mechanisms that comply with applicable laws, Executive Orders, directives, policies, regulations, standards, and guidance.

3.3.2.3.4 Non-Repudiation

a) The System must [2617] implement non-repudiation service.

1) The System must [2618] provide the capability to determine whether a given individual took a particular action (e.g., created information, sent a message, approved information or received a message).

3.3.2.3.5 Access Control

a) The System must [2619] provide for access control.

1) The System must [2620] provide the administrator the ability to manage the system accounts, including establishing, activating, modifying, reviewing, disabling, and removing accounts.

2) The System must grant access to the system based on:

    a. A valid need-to-know/need-to-share that is determined by assigned official duties and satisfying all personnel security criteria[2621]

    b. Intended system usage[3030]

3) The System must [2622] require proper identification for requests to establish system accounts.

4) The System must [2623] remove, disable, or otherwise secure guest, anonymous, or unnecessary accounts.

5) The System must [2624] employ automated mechanisms to support the management of the system accounts.

6) The System must [2625] automatically terminate temporary and emergency accounts.

7) The System must [2626] automatically disable inactive accounts after the Inactive Account Old system parameter.

8) When encryption of stored information is employed as an access enforcement mechanism, the System must [2627] use cryptography that is FIPS 140 (current version in effect at contract award) compliant.

9) The System must [2628] ensure that access to security functions (deployed in hardware, software, and firmware) and information is restricted to authorized personnel (e.g., security administrators, system and network administrators).

10) The System must [2629] enforce assigned authorizations for controlling the flow of information within the System and between interconnected systems.

11) The System must [2630] enforce the most restrictive set of rights and privileges or accesses needed by users (or processes acting on behalf of users) for the performance of specified tasks.

12) The System must [2631] employ the concept of least privilege for specific duties and information systems (including specific ports, protocols, and services) in accordance with risk assessments as necessary to adequately mitigate risk to organizational operations, organizational assets, and individuals.

13) The System must [2632] enforce a limit of consecutive invalid access attempts by a user according to the Login Attempts system parameter.

14) The System must [2633] display a FAA-approved, system use notification message before granting system access in accordance with FAA-OR-1370.102, System Use Notification and Disclaimer Statement Policy, informing potential users:

    a. That the user is accessing a U.S. Government information system[3031]

    b. That system usage may be monitored, recorded, and subject to audit[3032]

    c. That unauthorized use of the system is prohibited and subject to criminal and civil penalties[3033]

    d. That use of the system indicates consent to monitoring and recording[3034]

15) The System must [2634] display the system use notification message that provides appropriate privacy and security notices (based on associated privacy and security policies or summaries).

    a. The system use notification message must [2635] remain on the screen until the user takes explicit action to log on to the System.

16) The System must [2636] allow users to directly initiate session lock mechanisms.

17) The System must [2637] activate session lock mechanisms automatically after a period of inactivity defined in the Inactive System Lock system parameter.

18) The System must [2638] prevent further access to the system by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures.

19) The System must [2639] automatically terminate a session after a time period of inactivity defined in the Inactive Session Termination system parameter.

20) The System must [2640] employ automated mechanisms to facilitate the review of user activities.

21) The System must [2641] monitor, and control all methods of remote access.

22) The System must [2642] authorize each remote access method.

23) The System must [2643] restrict access achieved through dial-up connections or protect against unauthorized connections of subversion of authorized connections.

24) The System must [2644] employ automated mechanisms to facilitate the monitoring and control of remote access methods.

25) The System must [2645] use encryption to protect the confidentiality of remote access sessions.

26) The System must [2646] control all remote accesses through a managed access control point.

27) The System must [2647] permit remote access for privileged functions only for compelling operational needs.

28) The Vendor must [2648] document the rationale for remote access for privileged functions in the Information System Security Plan.

b) The System must [2649] enforce separation of security domains.

1) The System must [2650] enforce separation of duties through assigned access authorizations.

2) The System must [2651] establish appropriate divisions of responsibility and duties as needed to eliminate conflicts of interest in the responsibilities and duties of individuals.

c) The System must [2652] enforce secure import of authorized and unauthorized information and export of authorized information outside its security domain.

d) The System must [2653] provide the capability to physically restrict external system access for remote maintenance users.

3.3.2.3.6 Identification and authentication

a) The System must [2654] uniquely identify all authorized entities.

1) The System must [2655] uniquely identify users (or processes acting on behalf of users).

2) The System must [2656] identify specific devices before establishing a connection.

3) The System must manage user identifiers by:
   a. Uniquely identifying each user[2657]
   b. Verifying the identity of each user[3035]
   c. Receiving authorization to issue a user identifier from an appropriate organization official[3036]
   d. Ensuring that the user identifier is issued to the intended party[3037]
   e. Archiving user identifiers[3038]

b) The System must [2658] authenticate an authorized entity's identity.

1) The System must [2659] authenticate users (or processes acting on behalf of users).

2) The System must [2660] authenticate specific devices before establishing a connection.

3) The System must manage information system authenticators by:
   a. Defining initial authenticator content[2661]
   b. Establishing administrative procedures for initial authenticator distribution, for lost/compromised, or damaged authenticators, and for revoking authenticators[3039]
   c. Changing default authenticators upon the System installation[3040]
   d. Changing/refreshing authenticators periodically[3041]

4) The System must [2662] protect passwords from unauthorized disclosure and modification when stored and transmitted in accordance with FAA Order 1370.92, Password and PIN Management.

5) The System must [2663] provide obscure feedback of authentication information during the authentication process to protect the information from possible exploitation/use by unauthorized individuals.

6) For authentication to a cryptographic module, the System must [2664] employ authentication methods that is FIPS 140 (current version in effect at contract award) compliant.

c) The System must [2665] provide mechanisms to protect the authenticity of communications sessions.

3.3.2.3.7 Malicious Activity

a) The System must [2666] protect against malicious activity.

1) The System must [2667] implement malicious code (e.g. spyware, adware) protection, that includes a capability for automatic updates.

2) The System must [2668] centrally manage malicious code (e.g. spyware, adware) protection mechanisms.

3) The System must [2669] employ tools and techniques to monitor events on the system, detect attacks, and provide identification of unauthorized use of the system.

4) The System must [2670] monitor inbound and outbound communications for unusual or unauthorized activities or conditions indicating the presence of malicious code, the unauthorized export of information or signaling to an external information system.

b) The System must [2671] alert administrators when malicious activity is detected.

1) The System must [2672] receive information system security alerts/advisories on a regular basis, issue alerts/advisories to appropriate personnel, and take appropriate actions in response.

2) The Vendor must [2673] document the types of actions to be taken in response to security alerts/advisories.

3.3.2.3.8 Security Operation

a) The System must [2674] protect access to assets during all operational states.

1) The System must verify the correct security operations upon:

   a. System startup[2675]

   b. System restart[3042]

   c. Command by user with appropriate privilege[3043]

   d. Periodically at a FAA-defined time period[3044]

2) The System must [2676] notify system administrators when abnormal security operations are discovered.

b) The System must [2677] enforce system security rules during all operational states.

1) The System must [2678] terminate a network connection at the end of a session.

2) The System must [2679] terminate a network connection after a FAA-defined time period of inactivity.

3.3.2.3.9 Security Management

a) The System must [2680] implement technical security management.

b) The System must [2681] enforce established security rules and procedures.

1) The System must [2682] identify, report, and correct information system flaws.

2) The System must [2683] restrict the capability to input information to the system to authorized personnel (e.g., system administrators, maintenance personnel) only.

3) The System must [2684] check information inputs for accuracy, completeness, and validity and authenticity.

4) The System must [2685] identify and handle error conditions in an expeditious manner without providing information that could be exploited by adversaries.

5) User error messages generated by the System must [2686] provide timely and useful information to users without revealing information that could be exploited by unauthorized personnel.

6) The System must [2687] reveal system error messages only to authorized personnel (e.g., system administrators, maintenance personnel).

c) The System must [2688] provide centralized security incident reporting.

   1) The System must [2689] promptly report incident information to appropriate authorities.

   2) The System must [2690] employ automated mechanisms to assist in the reporting of security incidents.

   3) The System must [2691] track information system security incidents on an ongoing basis.

   4) The System must [2692] document information system security incidents on an ongoing basis.

   5) The System must [2693] implement an incident handling capability for security incidents.

3.3.2.3.10 Security Audit

a) The System must [2694] record all system access attempts in a security audit log.

   1) The Vendor must [2695] specify which system components carry out auditing activities.

   2) The Vendor must [2696] define auditable events to support after-the-fact investigations of security incidents.

   3) The Vendor must [2697] periodically review and update the list of auditable events.

   4) The Vendor must [2698] produce audit records that contain sufficient information to establish what events occurred, the sources of the events, and the outcomes of the events.

   5) The System must include the following content in audit records:

      a. Date and time of the event[2699]

      b. The components of the System (e.g., software component, hardware component) where the event occurred[3045]

      c. Type of event[3046]

      d. Subject identity[3047]

      e. The outcome (success or failure) of the event[3048]

   6) The System must [2700] provide the capability to include additional information in the audit records for audit events identified by type, location, or subject.

b) The System must [2701] preserve the security audit log for a minimum of 90 days.

   1) The System must [2702] allocate sufficient audit record storage capacity.

   2) The System must [2703] configure auditing to reduce the likelihood of such capacity being exceeded.

c) The System must [2704] prevent modification of the events recorded in the security audit log.

   1) The System must protect audit information and audit tools from:

      a. Unauthorized access[2705]

      b. Modification[3049]

     c.   Deletion[3050]

d)   The System must [2706] record all detected malicious activity in the security audit log.

e)   The System must [2707] record all attempts to violate system security rules in the security audit log.

f)   The System must [2708] record all security administration activities in the security audit log.

g)   The System must [2709] implement security audit review mechanisms.

    1)   In the event of an audit failure or audit storage capacity being reached, the System must [2710] alert the system administrator.

    2)   In the event of an audit failure or audit storage capacity being reached, the System must [3063], at a minimum, increase storage capacity or overwrite oldest audit records.

    3)   The System must [2711] provide an audit reduction and report generation capability that supports after-the-fact investigations of security incidents without altering original audit records.

    4)   The System must [2712] provide timestamps for use in audit record generation.

h)   The System must [2713] record the security audit log during all modes and states.

i)   The Vendor must [2714] provide audit-recording tools for the following purposes:

    1)   The Vendor must provide audit-recording tools to collect information for deterrence, detection, and damage assessment objectives without compromising:

        a.   System performance[2715]

        b.   System capacity[3051]

    2)   The Vendor must provide audit-recording tools to analyze information for deterrence, detection, and damage assessment objectives without compromising:

        a.   System performance[2716]

        b.   System capacity[3052]

j)   The System must [2717] provide a notification capability of security events.

    1)   The System must [2718] employ automated mechanisms to alert security personnel of inappropriate or unusual activities.

3.3.2.3.11 Recovery

a)   The System must [2719] provide recovery measures from security incidents.

    1)   The System must [2720] employ automated mechanisms to increase the availability of incident response-related information and support.

b)   The System must [2721] provide recovery features for survivability in the event of system compromise.

c)   The System must [2722] ensure that all security functions complete successfully.

d)   The System must [2723] ensure that all security functions recover.

    1)   The System must [2724] ensure that all security functions recover to a consistent state.

2) The System must [2725] ensure that all security functions recover to a secure state.

e) The System must [2726] provide a short-term uninterruptible power supply to facilitate an orderly shutdown of the system in the event of a primary power source loss.

3.3.2.4 Personnel Security

a) The System must [2727] comply with FAA Order 1600.1, Personnel Security Program.

   1) The System must [2728] assign a risk designation to all positions.

   2) The System must [2729] review and revise position risk designations at a FAA-defined time period.

b) The Vendor and Industrial personnel security control must [2730] comply with FAA Order 1600.72, Contractor and Industrial Security Program.

c) The Vendor and Industrial personnel security control must [2731] comply with FAA Order 1600.73, Contractor and Industrial Security Program Operating Procedures.

3.3.2.5 Data Management

a) The System must [2732] provide for the management of data in accordance with the following:

   1) The Vendor must [2733] provide for the management of data in accordance with FAA Order 1375.1, Data Management.

      a. The Vendor must [2734] obtain, protect as required and make available to authorized personnel, adequate documentation for the System.

      b. The Vendor must [2735] include documentation for the System's security features with administrator and user guides.

      c. The System must [2736] comply with software usage restrictions.

      d. The System must [2737] restrict access to the System media to authorized individuals.

      e. The System must:

         1. Employ automated mechanisms to restrict access to media storage areas[3053]

         2. Employ automated mechanisms to audit access attempts[3054]

         3. Employ automated mechanisms to audit access granted[3055]

      f. The System must [2738] sanitize system media, both digital and non-digital, prior to disposal or release for reuse or removal from FAA premises or any reason, in accordance with FAA Order 1370.100, Media Sanitizing and Destruction Policy.

   2) The System must [2739] provide for the management of data in accordance with FAA Order 1200.22, NAS Data and Interface Equipment Used by Outside Interests.

      a. The System must [2740] restrict downloading and installation of software by users.

b. The System must [2741] require that providers of external information system services employ adequate security controls in accordance with FAA Order 1370.82, Information System Security Program.

c. The System must [2742] monitor security control compliance of external information services.

d. The System must [2743] prohibit authorized individuals from using an external information system to access the System or to process, store, or transmit FAA-controlled information.

3.3.2.6 Internet Access

a) The System must [2744] * protect any access to the Internet in accordance with the following:

　　1) The System must [2745] * protect any access to the Internet in accordance with FAA Order 1370.83, Internet Access Points.

　　　　a. The System must [2746] * prevent unauthorized and unintended information transfer via shared system resources.

　　2) The System must [2747] * protect any access to the Internet in accordance with FAA Order 1370.84, Internet Services.

　　　　a. The System must [2748] * monitor and control communications at the external boundary of the system and at key internal boundaries within the system.

　　　　b. The Vendor must [2749] * physically allocate publicly accessible system components (e.g., public web servers) to separate sub-networks with separate, physical network interfaces.

　　　　c. The System must [2750] * prevent public access into the system's internal networks except as appropriately authorized.

　　　　d. The Vendor must [2751] * limit the number of access points to the System to allow for better monitoring of inbound and outbound network traffic.

　　　　e. The Vendor must [2752] * implement a managed interface with any external telecommunication service, implementing controls appropriate to the required protection of the confidentiality and integrity of the information being transmitted.

　　　　f. The System must [2753] * deny network traffic by default and allow network traffic by exception.

3.3.3　Interchangeability

Reserved.

3.3.4　Human Factors

3.3.4.1　Computer-Human Interface (CHI)

a) The System CHI must [2754] provide a Graphical User Interface (GUI) that follows the guidance of the FAA Human Factors Design Standard for Acquisition of Commercial-Off-The-Shelf, Non Developmental, and Developmental Systems

(HFDS), DOT-FAA/CT/03-05, HF STD-001, Chapter 8 and FAA G-2100, Electronic Equipment, General Requirements, Section 3.3.6, Human Engineering.

3.3.4.1.1 Displays

a)   The System CHI must [2755] provide the information necessary to operate the display screens utilized in performing System functions.

b)   The System CHI must [2756] be designed for simplicity to allow operators to move easily around the screens and to related screens.

    1)   The System CHI display screens must [2757] appear orderly and clutter free.

    2)   The System CHI physical displays must [2758] be presented in consistent and predictable locations.

    3)   The System CHI display content must [2759] be presented in consistent and predictable locations.

    4)   The language used must [2760] be plain and simple, appropriate to the user population.

    5)   The means for moving around the screen and to related screens must [2761] be simple.

    6)   Interrelationships must [2762] be indicated clearly.

c)   The System text displays must [2763] be less than or equal to a screen density of 60% (not more of 60% of character spaces should be filled), whenever possible.

d)   The System users must [2764] be able to see whole data sets of interest, whenever possible, such as an entire page, map, or graphic.

e)   The System displays must [2765] be readable by operators and maintainers in FSS ambient light conditions.

f)   The System must [2766] allow configuration of multiple logical displays.

    1)   The System must [2767] provide a title bar on logical displays.

    2)   The System must [2768] provide a menu bar on logical displays.

    3)   The System must [2769] provide the capability of scrolling on logical displays.

    4)   The System must [2770] allow resizing of multiple logical displays within the physical display.

    5)   The System must [2771] allow relocation of multiple logical displays within the physical display.

    6)   The System must [2772] provide the capability for drag and drop of information between multiple logical displays

    7)   The System must [2773] provide the capability for cut and paste of information between multiple logical displays.

g)   The System must [2774] be capable of displaying all information generated by the equipment to the operator or maintainer.

h)   The System must [2775] use redundant information coding (e.g., color, shapes, auditory coding) to highlight resource status for display of graphical information to users.

i)   The System must [2776] use redundant information coding (e.g., color, shapes, auditory coding) to highlight resource status for display of list/text information to users.

j)   The System must [2777] display minimized Weather Graphic products in thumbnails.

k)   The System must [2778] allow the title of the thumbnail to be displayed along with the thumbnail graphic.

l)   The System thumbnail title bar must [2779] be readable to the user, at a normal viewing distance.

m)   The System must [2780] allow the thumbnail graphic to be expanded by double-clicking the thumbnail graphic.

n)   The System must [2781] allow multiple thumbnail graphics to be displayed at one time.

o)   The System CHI must [2782] provide the information necessary to operate the user help windows.

    1)   The System Help information must [2783] be appropriate to the experience and training of the user.

    2)   When a system or application uses abbreviations in its user-computer interactions, it must [2784] provide an easy on-line, context-sensitive means for a user to learn the definition of an abbreviation, such as an on-line dictionary or Help screen.

p)   The System software must [2785] be standardized to the extent possible so that applications that address common functions use the same user dialogues, procedures and interfaces.

q)   The System must [2786] display manually entered data for user confirmation prior to system acceptance and processing.

r)   The System must [2787] display user-entered data for confirmation, except for passwords.

s)   The System must [2788] provide positive feedback to operator data entry actions.

    1)   The System positive confirmation messages must [2789] prohibit interference with user sequence of actions.

    2)   The System confirmation messages must [2790] require a yes/no response when a potentially destructive action has been requested by the user.

t)   The System must [2791] provide the capability for an audible alarm upon arrival of Alert Messages.

    1)   The System auditory signals must [2792] be only used to supplement visual signals.

    2)   The System auditory signals must [2793] allow volume control:

        a.   To provide a volume adjustment[3056]

        b.   To make auditory output as loud as practical[3057]

        c.   To use sounds with strong middle- and low-frequency components (500 - 3000 Hz)[3058]

    d.   To present auditory information continuously or repetitively until the user responds to it[3059]

u)   The System startup sequence must [2794] provide efficient log-in capability, appropriate to user needs.

v)   The System software must [2795] provide window states (logical displays) in accordance with HFDS section 8.14.5, 8.14.6.2, and 8.14.6.3.

w)   The System must [2796] provide a List Sorting capability.

3.3.4.1.2 Data Entry

a)   The System workstation must [2797] at a minimum include a QWERTY keyboard and a point-and-click device.

b)   The System must [2798] employ a pointing device for cursor control.

c)   The System cursor must [2799] be seen on the display to indicate the character space the next entry will affect.

d)   The System keyboard must [2800] include a numeric keypad, function keys, and cursor control keys.

e)   The System must [2801] provide Fixed-Function keys.

    1)   The System Fixed-Function keys must [2802] be standardized throughout the system.

f)   The System keyboard height and slope must [2803] be adjustable to accommodate users.

g)   The System must [2804] allow configuration of multiple physical displays.

    1)   The System must [2805] provide the capability for logical displays on at least two physical monitors.

    2)   The System workstation monitors must [2806] be controlled by a single set of input devices with the display of data on one screen not affecting the current display of data on any other screen

    3)   The System monitors must [2807] provide a brightness control.

    4)   The System monitors must [2808] provide separate horizontal and vertical display adjustment controls.

    5)   The System must [2809] allow for physical monitors to be arranged either horizontally or vertically.

h)   The System data entry function to select a display must [2810] be via the keyboard or point-and-click device.

i)   The System handwriting input device must [2811] * accommodate expected operational lighting conditions, both high and low illumination.

j)   The System handwriting input device must [2812] * accommodate right and left handed users.

k)   The System handwriting input device must [2813] * have an easy means of connecting to and transferring data to or from other systems.

l)   The System handwriting input device must [2814] * have good legibility and color contrast at an operational viewing angle.

m)   The System handwriting input device must [2815] * have sufficient screen size and resolution for the task.

n)   The System handwriting input device must [2816] * be sufficiently durable to withstand drops and knocks associated with normal use.

o)   If the System handwriting input device is used to transmit data over a wireless network, it must [2817] * have consistent and available secure connectivity.

p)   The System handwriting input device must [2818] * not produce so much heat as to be uncomfortable to the user.

3.3.4.1.3 Maintainer Computer-Human Interface

a)   The System Maintenance CHI must [2819] provide a GUI that follows the guidance of the HFDS, Section 4.1.1.1, General Design Guidance and FAA G-2100, Electronic Equipment, General Requirements, Section 3.3.6, as applicable.

b)   The System maintenance Monitor and Control (M&C) position displays must [2820] be presented to the Technical Operations technicians in the form of movable, resizable windows.

c)   The System maintenance M&C function must [2821] provide a set of views that allow the Technical Operations technicians to "drill down" to obtain increasingly detailed performance and resource status.

d)   The System maintenance M&C monitors may consist of more than one display on the same workstation; these displays must [2822] have no restriction as to display content.

e)   The System maintenance M&C function must [2823] display an applicable error message if an invalid request or command is entered.

f)   The System maintenance M&C function must [2824] display graphical information using redundant information coding (e.g., color, shapes, auditory coding) to highlight resource status.

g)   The System maintenance M&C function must [2825] display list/text information using redundant information coding (e.g., color, shapes, auditory coding) to highlight resource status.

h)   The System maintenance M&C function must [2826] support command composition using at a minimum a combination of keyboard entries and pointer device selections.

i)   The System maintenance M&C function must [2827] support command initiation using at a minimum a combination of keyboard entries and pointer device selections.

j)   The System maintenance M&C function must [2828] display commands under development for confirmation prior to execution.

k)   The System maintenance M&C function must [2829] provide consistent and standardized command entry such that similar actions are commanded in similar ways.

l)   The System maintenance M&C function must [2830] prevent inadvertent or erroneous actions that can degrade operational capability.

m)   The System maintenance M&C function generated messages must [2831] be presented in concise, meaningful text, such that the translation of error, function, or status codes is not required of the Technical Operations technicians in order to understand the information.

n) The System maintenance M&C function generated alerts must [2832] be presented in concise, meaningful text, such that the translation of error, function or status codes is not required of the Technical Operations technicians in order to understand the information.

o) The System maintenance M&C function generated visual alarms must [2833] be designed to incorporate clearly discriminative features that distinguish the warning (e.g., color, blink, size, etc.) from other display information.

p) The System maintenance M&C function must [2834] allow the Technical Operations technicians to reset existing aural and visual alarms with a single action.

q) The System maintenance M&C function must [2835] provide a command response for monitored parameters with the condition "status disabled" after the Technical Operations technicians executes a command to disable alarm/normal detection.

3.3.5 Miscellaneous

Not applicable in this specification.

3.4 Logistics

3.4.1 Maintenance

a) The System maintenance philosophy must [2836] concur with the program maintenance concept and ensure that supportability requirements are incorporated into the design of the equipment/system.

b) The maintenance of the System must [2837] be in accordance with (IAW) FAA Order 1100.157, National Systems Engineering Divisions Maintenance or an industry standard that is acceptable to the FAA.

c) The System must [2838] meet the maintainability requirements of FAA 6000.30 Policy for Maintenance of the NAS.

3.4.2 Supply Support

3.4.2.1 Depot Level Maintenance

a) Depot level repair support must [2839] be provided for System LRUs.

b) Depot level supply support must [2840] be provided for the System LRUs.

3.4.2.2 Warranty

a) Warranty items must [2841] be reported and managed in accordance with FAA Order 4650.20 Reporting and Replacement of Items Falling Under Warranty.

3.4.2.3 Field Level Maintenance Repair

a) Field level maintenance activities must [2842] be performed on the System equipment installed in its operating environment.

b) Field level maintenance activities must [2843] include preventative and corrective maintenance actions.

3.4.3 Bar Coding

a) AFSM equipment must [2844] be bar coded consistent with FAA Asset Identification Specification version 2.5.2 dated June 16, 2006.

3.5 Personnel and Training

See SOW.

3.6 Major Component Characteristics

Not applicable in this specification.

3.7 Precedence and Combined Characteristics

3.7.1 Precedence
See SOW.

3.7.2 Combined Characteristics
See SOW.

4 Requirements Verification Correlation

4.1 AFSM Verification

In accordance with the AFSM Automation System Statement of Work (SOW), the vendor is responsible for verification of all AFSM Automation System Specification requirements as defined in this document. Table 4 - 1 AFSM Automation System Requirements Verification Correlation Matrix identifies the requirements for the system and establishes the expected test verification method for the associated requirement. Table 4 - 2 AFSM Automation System Tiered Requirements Verification Correlation Matrix identifies the future requirements for the System.

4.2 Verification Methods

a) The System requirements must [2845] be verified using the verification methods defined in the following sub-sections.

4.2.1 Test

A method of verification wherein performance is measured during or after the controlled application of functional and/or environmental stimuli. Quantitative measurements are analyzed to determine the degree of compliance.

4.2.2 Demonstration

A method of verification where qualitative determination of properties is made for a configuration item, including software and/or technical data and documentation. The items being verified are observed, but not quantitatively measured, in a dynamic state.

4.2.3 Analysis

A method of verification that consists of comparing hardware or software design with known scientific and technical principles, procedures, and practices to estimate the capability of the proposed design to meet the mission and system requirements.

4.2.4 Inspection

A method of verification used to determine compliance without the use of special laboratory appliances, procedures, or services, and consists of a nondestructive static-state examination of the hardware, software, and/or the technical data and documentation.

Table 4-1 AFSM Automation System Requirements - Verification Correlation Matrix

Specification Paragraph	Req. Number	Verification Method
3 Requirements	--	
3.1 System Definition	--	
3.1.1 Functional Layouts	--	
3.1.1.1 Weather Briefing	--	
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	1	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	2	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	3	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	4	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	5	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	6	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	7	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	8	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	9	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	10	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	11	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	12	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	13	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	14	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	15	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	16	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	17	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	18	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	19	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	20	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	21	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	22	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	23	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	24	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	25	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	26	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	27	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	28	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	29	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	30	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	31	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	32	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	33	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	34	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	35	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	36	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	37	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	38	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	39	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	40	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	41	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	42	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	43	D
3.1.1.1.1 Alphanumeric (A/N) and Aeronautical Data	44	D
3.1.1.1.2 Alphanumeric Weather Briefings	45	D/T
3.1.1.1.2 Alphanumeric Weather Briefings	46	D
3.1.1.1.2 Alphanumeric Weather Briefings	47	D
3.1.1.1.2 Alphanumeric Weather Briefings	49	D
3.1.1.1.2 Alphanumeric Weather Briefings	50	D
3.1.1.1.2 Alphanumeric Weather Briefings	51	D
3.1.1.1.2 Alphanumeric Weather Briefings	52	D
3.1.1.1.2 Alphanumeric Weather Briefings	53	D
3.1.1.1.2 Alphanumeric Weather Briefings	2846	D
3.1.1.1.2 Alphanumeric Weather Briefings	2847	D
3.1.1.1.2 Alphanumeric Weather Briefings	2848	D
3.1.1.1.2 Alphanumeric Weather Briefings	2849	D
3.1.1.1.2 Alphanumeric Weather Briefings	2850	D
3.1.1.1.2 Alphanumeric Weather Briefings	2851	D
3.1.1.1.2 Alphanumeric Weather Briefings	2852	D
3.1.1.1.2 Alphanumeric Weather Briefings	2853	D
3.1.1.1.2 Alphanumeric Weather Briefings	2854	D
3.1.1.1.2 Alphanumeric Weather Briefings	2855	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.2.1 Standard Weather Briefing	54	D
3.1.1.1.2.1 Standard Weather Briefing	2856	D
3.1.1.1.2.1 Standard Weather Briefing	56	D
3.1.1.1.2.1 Standard Weather Briefing	57	D
3.1.1.1.2.1 Standard Weather Briefing	58	D
3.1.1.1.2.1 Standard Weather Briefing	59	D
3.1.1.1.2.1 Standard Weather Briefing	60	D
3.1.1.1.2.1 Standard Weather Briefing	61	D
3.1.1.1.2.1 Standard Weather Briefing	62	D
3.1.1.1.2.1 Standard Weather Briefing	63	D
3.1.1.1.2.1 Standard Weather Briefing	64	D
3.1.1.1.2.1 Standard Weather Briefing	65	D
3.1.1.1.2.1 Standard Weather Briefing	66	D
3.1.1.1.2.1 Standard Weather Briefing	67	D
3.1.1.1.2.1 Standard Weather Briefing	68	D
3.1.1.1.2.1 Standard Weather Briefing	69	D
3.1.1.1.2.1 Standard Weather Briefing	70	D
3.1.1.1.2.1 Standard Weather Briefing	71	D
3.1.1.1.2.1 Standard Weather Briefing	72	D
3.1.1.1.2.1 Standard Weather Briefing	73	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	75	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	76	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2857	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2858	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2859	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2860	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2861	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	3060	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	77	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2862	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2863	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2864	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2865	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2866	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.2.1.1 Standard Weather Briefing Products	78	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2867	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2868	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	79	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2869	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2870	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2871	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2872	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2873	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2874	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2875	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2876	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2877	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2878	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	2879	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	80	D
3.1.1.1.2.1.1 Standard Weather Briefing Products	81	D
3.1.1.1.2.2 Abbreviated Weather Briefing	82	D
3.1.1.1.2.2 Abbreviated Weather Briefing	2880	D
3.1.1.1.2.2 Abbreviated Weather Briefing	84	D
3.1.1.1.2.2 Abbreviated Weather Briefing	85	D
3.1.1.1.2.2 Abbreviated Weather Briefing	86	D
3.1.1.1.2.2 Abbreviated Weather Briefing	87	D
3.1.1.1.2.2 Abbreviated Weather Briefing	88	D
3.1.1.1.2.2 Abbreviated Weather Briefing	89	D
3.1.1.1.2.2 Abbreviated Weather Briefing	90	D
3.1.1.1.2.3 Outlook Weather Briefing	92	D
3.1.1.1.2.3 Outlook Weather Briefing	2881	D
3.1.1.1.2.3 Outlook Weather Briefing	94	D
3.1.1.1.2.3 Outlook Weather Briefing	95	D
3.1.1.1.2.3 Outlook Weather Briefing	2882	D
3.1.1.1.2.3 Outlook Weather Briefing	96	D
3.1.1.1.2.3 Outlook Weather Briefing	97	D
3.1.1.1.2.3 Outlook Weather Briefing	98	D

Specification Paragraph		Req. Number	Verification Method
3.1.1.1.2.3	Outlook Weather Briefing	99	D
3.1.1.1.2.3	Outlook Weather Briefing	100	D
3.1.1.1.2.3	Outlook Weather Briefing	101	D
3.1.1.1.2.5	Area Briefing Format	115	D
3.1.1.1.2.5	Area Briefing Format	116	D
3.1.1.1.2.5	Area Briefing Format	117	D
3.1.1.1.2.5	Area Briefing Format	118	D
3.1.1.1.2.5	Area Briefing Format	119	D
3.1.1.1.2.5	Area Briefing Format	120	D
3.1.1.1.2.5	Area Briefing Format	121	D
3.1.1.1.2.6	Region Briefing Format	122	D
3.1.1.1.2.6	Region Briefing Format	123	D
3.1.1.1.2.6	Region Briefing Format	124	D
3.1.1.1.2.6	Region Briefing Format	125	D
3.1.1.1.2.6	Region Briefing Format	126	D
3.1.1.1.2.6	Region Briefing Format	127	D
3.1.1.1.2.6	Region Briefing Format	128	D
3.1.1.1.2.6	Region Briefing Format	129	D
3.1.1.1.2.7	Route Briefing Format	130	D
3.1.1.1.2.7	Route Briefing Format	131	D
3.1.1.1.2.7	Route Briefing Format	132	D
3.1.1.1.2.7	Route Briefing Format	133	D
3.1.1.1.2.7	Route Briefing Format	134	D
3.1.1.1.2.7	Route Briefing Format	135	D
3.1.1.1.2.7	Route Briefing Format	136	D
3.1.1.1.2.7	Route Briefing Format	137	D
3.1.1.1.2.8	Trend Briefing Format	138	D
3.1.1.1.2.8	Trend Briefing Format	139	D
3.1.1.1.2.8	Trend Briefing Format	140	D
3.1.1.1.2.8	Trend Briefing Format	141	D
3.1.1.1.2.8	Trend Briefing Format	142	D
3.1.1.1.2.8	Trend Briefing Format	143	D
3.1.1.1.2.8	Trend Briefing Format	144	D
3.1.1.1.2.9	Selected Product Retrieval	146	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.2.9 Selected Product Retrieval	147	D
3.1.1.1.2.9 Selected Product Retrieval	148	D
3.1.1.1.2.9 Selected Product Retrieval	149	D
3.1.1.1.2.9 Selected Product Retrieval	150	D
3.1.1.1.2.9 Selected Product Retrieval	151	D
3.1.1.1.2.9 Selected Product Retrieval	152	D
3.1.1.1.2.9 Selected Product Retrieval	153	D
3.1.1.1.2.9 Selected Product Retrieval	154	D
3.1.1.1.2.9 Selected Product Retrieval	155	D
3.1.1.1.2.9 Selected Product Retrieval	156	D
3.1.1.1.2.9 Selected Product Retrieval	157	D
3.1.1.1.2.9 Selected Product Retrieval	158	D
3.1.1.1.2.9 Selected Product Retrieval	159	D
3.1.1.1.2.10 Forecast Winds and Temperature Aloft	160	D
3.1.1.1.2.10 Forecast Winds and Temperature Aloft	161	D
3.1.1.1.2.10 Forecast Winds and Temperature Aloft	162	D
3.1.1.1.2.10 Forecast Winds and Temperature Aloft	163	D
3.1.1.1.2.10 Forecast Winds and Temperature Aloft	164	D
3.1.1.1.2.10 Forecast Winds and Temperature Aloft	165	D
3.1.1.1.2.10 Forecast Winds and Temperature Aloft	166	D
3.1.1.1.3 Weather Graphics	168	D
3.1.1.1.3 Weather Graphics	2884	D
3.1.1.1.3 Weather Graphics	2885	D
3.1.1.1.3 Weather Graphics	2886	D
3.1.1.1.3 Weather Graphics	2887	D
3.1.1.1.3 Weather Graphics	2888	D
3.1.1.1.3 Weather Graphics	2889	D
3.1.1.1.3 Weather Graphics	2890	D
3.1.1.1.3 Weather Graphics	2891	D
3.1.1.1.3 Weather Graphics	2892	D
3.1.1.1.3 Weather Graphics	2893	D
3.1.1.1.3 Weather Graphics	169	D
3.1.1.1.3 Weather Graphics	170	D
3.1.1.1.3.1 Weather Graphic Products	171	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.3.1 Weather Graphic Products	172	D
3.1.1.1.3.1 Weather Graphic Products	173	D
3.1.1.1.3.1 Weather Graphic Products	174	D
3.1.1.1.3.1 Weather Graphic Products	175	D
3.1.1.1.3.1 Weather Graphic Products	176	D
3.1.1.1.3.1 Weather Graphic Products	2894	D
3.1.1.1.3.1 Weather Graphic Products	2895	D
3.1.1.1.3.1 Weather Graphic Products	2896	D
3.1.1.1.3.1 Weather Graphic Products	177	D
3.1.1.1.3.1 Weather Graphic Products	178	D
3.1.1.1.3.1 Weather Graphic Products	179	D
3.1.1.1.3.1 Weather Graphic Products	180	D
3.1.1.1.3.1 Weather Graphic Products	2897	D
3.1.1.1.3.1 Weather Graphic Products	2898	D
3.1.1.1.3.1 Weather Graphic Products	2899	D
3.1.1.1.3.1 Weather Graphic Products	181	D
3.1.1.1.3.1 Weather Graphic Products	2900	D
3.1.1.1.3.1 Weather Graphic Products	182	D
3.1.1.1.3.1 Weather Graphic Products	183	D
3.1.1.1.3.1 Weather Graphic Products	2901	D
3.1.1.1.3.1 Weather Graphic Products	2902	D
3.1.1.1.3.1 Weather Graphic Products	2903	D
3.1.1.1.3.1 Weather Graphic Products	2904	D
3.1.1.1.3.1 Weather Graphic Products	2905	D
3.1.1.1.3.1 Weather Graphic Products	2906	D
3.1.1.1.3.1 Weather Graphic Products	184	D
3.1.1.1.3.1 Weather Graphic Products	2907	D
3.1.1.1.3.1 Weather Graphic Products	2908	D
3.1.1.1.3.1 Weather Graphic Products	2909	D
3.1.1.1.3.1 Weather Graphic Products	185	D
3.1.1.1.3.1 Weather Graphic Products	186	D
3.1.1.1.3.1 Weather Graphic Products	187	D
3.1.1.1.3.1 Weather Graphic Products	188	D
3.1.1.1.3.1 Weather Graphic Products	189	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.3.1 Weather Graphic Products	190	D
3.1.1.1.3.1 Weather Graphic Products	191	D
3.1.1.1.3.1 Weather Graphic Products	192	D
3.1.1.1.3.1 Weather Graphic Products	193	D
3.1.1.1.3.1 Weather Graphic Products	195	D
3.1.1.1.3.1 Weather Graphic Products	196	D
3.1.1.1.3.1 Weather Graphic Products	197	D
3.1.1.1.3.1 Weather Graphic Products	198	D
3.1.1.1.3.1.1 NEXRAD Radar Products	199	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2910	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2911	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2912	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2913	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2914	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2915	D
3.1.1.1.3.1.1 NEXRAD Radar Products	200	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2916	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2917	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2918	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2919	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2920	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2921	D
3.1.1.1.3.1.1 NEXRAD Radar Products	201	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2922	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2923	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2924	D
3.1.1.1.3.1.1 NEXRAD Radar Products	2925	D
3.1.1.1.3.1.1 NEXRAD Radar Products	202	D
3.1.1.1.3.1.1 NEXRAD Radar Products	203	D
3.1.1.1.3.1.1 NEXRAD Radar Products	204	D
3.1.1.1.3.1.1 NEXRAD Radar Products	205	D
3.1.1.1.3.1.2 Satellite Imagery Products	206	D
3.1.1.1.3.1.2 Satellite Imagery Products	2926	D
3.1.1.1.3.1.2 Satellite Imagery Products	2927	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.3.1.2 Satellite Imagery Products	2928	D
3.1.1.1.3.1.2 Satellite Imagery Products	2929	D
3.1.1.1.3.1.2 Satellite Imagery Products	2930	D
3.1.1.1.3.1.2 Satellite Imagery Products	2931	D
3.1.1.1.3.1.2 Satellite Imagery Products	2932	D
3.1.1.1.3.1.2 Satellite Imagery Products	2933	D
3.1.1.1.3.1.2 Satellite Imagery Products	207	D
3.1.1.1.3.1.2 Satellite Imagery Products	2934	D
3.1.1.1.3.1.2 Satellite Imagery Products	2935	D
3.1.1.1.3.1.2 Satellite Imagery Products	2936	D
3.1.1.1.3.1.2 Satellite Imagery Products	2937	D
3.1.1.1.3.1.2 Satellite Imagery Products	2938	D
3.1.1.1.3.1.2 Satellite Imagery Products	2939	D
3.1.1.1.3.1.2 Satellite Imagery Products	2940	D
3.1.1.1.3.1.2 Satellite Imagery Products	2941	D
3.1.1.1.3.1.2 Satellite Imagery Products	208	D
3.1.1.1.3.1.2 Satellite Imagery Products	2942	D
3.1.1.1.3.1.2 Satellite Imagery Products	2943	D
3.1.1.1.3.1.2 Satellite Imagery Products	2944	D
3.1.1.1.3.1.2 Satellite Imagery Products	2945	D
3.1.1.1.3.1.2 Satellite Imagery Products	2946	D
3.1.1.1.3.1.2 Satellite Imagery Products	2947	D
3.1.1.1.3.1.2 Satellite Imagery Products	2948	D
3.1.1.1.3.1.2 Satellite Imagery Products	2949	D
3.1.1.1.3.1.2 Satellite Imagery Products	209	D
3.1.1.1.3.1.2 Satellite Imagery Products	210	D
3.1.1.1.3.1.2 Satellite Imagery Products	211	D
3.1.1.1.3.1.2 Satellite Imagery Products	212	D
3.1.1.1.3.1.2 Satellite Imagery Products	213	D
3.1.1.1.3.1.3 Gridded Data Products	214	D
3.1.1.1.3.1.3 Gridded Data Products	215	D
3.1.1.1.3.3 Static Overlays	232	D
3.1.1.1.3.3 Static Overlays	233	D
3.1.1.1.3.3 Static Overlays	234	D

Specification Paragraph		Req. Number	Verification Method
3.1.1.1.3.3	Static Overlays	235	D
3.1.1.1.3.3	Static Overlays	236	D
3.1.1.1.3.3	Static Overlays	237	D
3.1.1.1.3.3	Static Overlays	238	D
3.1.1.1.3.3	Static Overlays	239	D
3.1.1.1.3.3	Static Overlays	240	D
3.1.1.1.3.3	Static Overlays	241	D
3.1.1.1.3.3	Static Overlays	242	D
3.1.1.1.3.3	Static Overlays	243	D
3.1.1.1.3.3	Static Overlays	244	D
3.1.1.1.3.3	Static Overlays	245	D
3.1.1.1.3.3	Static Overlays	246	D
3.1.1.1.3.3	Static Overlays	247	D
3.1.1.1.3.3	Static Overlays	248	D
3.1.1.1.3.3	Static Overlays	249	D
3.1.1.1.3.3	Static Overlays	250	D
3.1.1.1.3.3	Static Overlays	251	D
3.1.1.1.3.3	Static Overlays	252	D
3.1.1.1.3.3	Static Overlays	253	D
3.1.1.1.3.3	Static Overlays	254	D
3.1.1.1.3.3	Static Overlays	255	D
3.1.1.1.3.3	Static Overlays	256	D
3.1.1.1.3.3	Static Overlays	257	D
3.1.1.1.3.3	Static Overlays	258	D
3.1.1.1.3.3	Static Overlays	259	D
3.1.1.1.3.3	Static Overlays	260	D
3.1.1.1.3.3	Static Overlays	261	D
3.1.1.1.3.3	Static Overlays	262	D
3.1.1.1.3.3	Static Overlays	263	D
3.1.1.1.3.4	Dynamic Overlays	264	D
3.1.1.1.3.4	Dynamic Overlays	265	D
3.1.1.1.3.4	Dynamic Overlays	266	D
3.1.1.1.3.4	Dynamic Overlays	267	D
3.1.1.1.3.4	Dynamic Overlays	268	D

Specification Paragraph		Req. Number	Verification Method
3.1.1.1.3.4	Dynamic Overlays	269	D
3.1.1.1.3.4	Dynamic Overlays	270	D
3.1.1.1.3.4	Dynamic Overlays	271	D
3.1.1.1.3.4	Dynamic Overlays	272	D
3.1.1.1.3.4	Dynamic Overlays	273	D
3.1.1.1.3.4	Dynamic Overlays	274	D
3.1.1.1.3.4	Dynamic Overlays	275	D
3.1.1.1.3.4	Dynamic Overlays	277	D
3.1.1.1.3.4	Dynamic Overlays	278	D
3.1.1.1.3.4	Dynamic Overlays	279	D
3.1.1.1.3.4	Dynamic Overlays	280	D
3.1.1.1.3.4	Dynamic Overlays	281	D
3.1.1.1.3.5	Popup Displays	282	D
3.1.1.1.3.5	Popup Displays	283	D
3.1.1.1.3.5	Popup Displays	2955	D
3.1.1.1.3.5	Popup Displays	2956	D
3.1.1.1.3.5	Popup Displays	2957	D
3.1.1.1.3.5	Popup Displays	2958	D
3.1.1.1.3.5	Popup Displays	2959	D
3.1.1.1.3.5	Popup Displays	2960	D
3.1.1.1.3.6	Animation	284	D
3.1.1.1.3.6	Animation	285	D
3.1.1.1.3.6	Animation	286	D
3.1.1.1.3.6	Animation	287	D
3.1.1.1.3.6	Animation	288	D
3.1.1.1.3.6	Animation	289	D
3.1.1.1.3.6	Animation	290	D
3.1.1.1.3.6	Animation	291	D
3.1.1.1.3.6	Animation	292	D
3.1.1.1.3.7	Product Sequencing	293	D
3.1.1.1.3.7	Product Sequencing	294	D
3.1.1.1.3.7	Product Sequencing	295	D
3.1.1.1.3.7	Product Sequencing	296	D
3.1.1.1.3.7	Product Sequencing	297	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.3.7 Product Sequencing	298	D
3.1.1.1.3.7 Product Sequencing	299	D
3.1.1.1.3.8 Zoom, Scroll, Pan and Drag	300	D
3.1.1.1.3.8 Zoom, Scroll, Pan and Drag	301	D
3.1.1.1.3.8 Zoom, Scroll, Pan and Drag	302	D
3.1.1.1.3.8 Zoom, Scroll, Pan and Drag	303	D
3.1.1.1.3.9 FAA Weather Cameras	304	D
3.1.1.1.3.9 FAA Weather Cameras	305	D
3.1.1.1.3.9 FAA Weather Cameras	306	D
3.1.1.1.3.9 FAA Weather Cameras	307	D
3.1.1.1.3.9 FAA Weather Cameras	308	D
3.1.1.1.3.9 FAA Weather Cameras	309	D
3.1.1.1.3.9 FAA Weather Cameras	310	D
3.1.1.1.3.9 FAA Weather Cameras	311	D
3.1.1.1.3.9 FAA Weather Cameras	312	D
3.1.1.1.3.9 FAA Weather Cameras	313	D
3.1.1.1.4 Graphics Earth Satellite Imagery	314	D
3.1.1.1.4 Graphics Earth Satellite Imagery	315	D
3.1.1.1.5 NOTAMs	316	D
3.1.1.1.5 NOTAMs	317	D
3.1.1.1.5 NOTAMs	318	D
3.1.1.1.5 NOTAMs	319	D
3.1.1.1.5 NOTAMs	320	D
3.1.1.1.5 NOTAMs	321	D
3.1.1.1.5 NOTAMs	322	D
3.1.1.1.5 NOTAMs	323	D
3.1.1.1.5 NOTAMs	324	D
3.1.1.1.5 NOTAMs	325	D
3.1.1.1.5 NOTAMs	326	D
3.1.1.1.5 NOTAMs	327	D
3.1.1.1.5 NOTAMs	328	D
3.1.1.1.5 NOTAMs	329	D
3.1.1.1.5 NOTAMs	330	D
3.1.1.1.5 NOTAMs	331	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.5 NOTAMs	332	D
3.1.1.1.5 NOTAMs	333	D
3.1.1.1.5 NOTAMs	334	D
3.1.1.1.5 NOTAMs	336	D
3.1.1.1.5 NOTAMs	337	D
3.1.1.1.5 NOTAMs	2961	D
3.1.1.1.5 NOTAMs	2962	D
3.1.1.1.5 NOTAMs	2963	D
3.1.1.1.5 NOTAMs	2964	D
3.1.1.1.5 NOTAMs	338	D
3.1.1.1.5 NOTAMs	339	D
3.1.1.1.5 NOTAMs	340	D
3.1.1.1.5 NOTAMs	341	D
3.1.1.1.5 NOTAMs	2965	D
3.1.1.1.5 NOTAMs	2966	D
3.1.1.1.5 NOTAMs	2967	D
3.1.1.1.5 NOTAMs	2968	D
3.1.1.1.5 NOTAMs	2969	D
3.1.1.1.5 NOTAMs	2970	D
3.1.1.1.5 NOTAMs	2971	D
3.1.1.1.5 NOTAMs	2972	D
3.1.1.1.5 NOTAMs	2973	D
3.1.1.1.5 NOTAMs	2974	D
3.1.1.1.5 NOTAMs	2975	D
3.1.1.1.5 NOTAMs	342	D
3.1.1.1.5 NOTAMs	343	D
3.1.1.2 Flight Plan Processing	--	
3.1.1.2.1 Flight Planning Functions	344	D
3.1.1.2.1 Flight Planning Functions	345	D
3.1.1.2.1 Flight Planning Functions	346	D
3.1.1.2.1 Flight Planning Functions	347	D
3.1.1.2.1 Flight Planning Functions	348	D
3.1.1.2.2 Auto Addressing	349	D
3.1.1.2.2 Auto Addressing	350	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.2 Auto Addressing	351	D
3.1.1.2.2 Auto Addressing	352	D
3.1.1.2.2 Auto Addressing	353	D
3.1.1.2.3 Manual Override of Flight Plan Fields	354	D
3.1.1.2.3 Manual Override of Flight Plan Fields	355	D
3.1.1.2.4 Flight Plan Field Validation	356	D
3.1.1.2.4 Flight Plan Field Validation	357	D
3.1.1.2.4 Flight Plan Field Validation	358	D
3.1.1.2.4 Flight Plan Field Validation	359	D
3.1.1.2.4.1 Route Elements	367	D
3.1.1.2.4.1 Route Elements	368	D
3.1.1.2.4.1 Route Elements	369	D
3.1.1.2.4.1 Route Elements	370	D
3.1.1.2.4.1 Route Elements	371	D
3.1.1.2.4.1 Route Elements	372	D
3.1.1.2.4.1 Route Elements	373	D
3.1.1.2.4.1 Route Elements	374	D
3.1.1.2.4.1 Route Elements	375	D
3.1.1.2.4.1 Route Elements	376	D
3.1.1.2.4.1 Route Elements	377	D
3.1.1.2.4.1 Route Elements	378	D
3.1.1.2.4.1 Route Elements	379	D
3.1.1.2.4.1 Route Elements	380	D
3.1.1.2.4.1 Route Elements	381	D
3.1.1.2.4.1 Route Elements	382	D
3.1.1.2.4.1 Route Elements	383	D
3.1.1.2.4.1 Route Elements	384	D
3.1.1.2.4.1 Route Elements	385	D
3.1.1.2.4.1.1 Validation of Route Elements	386	D
3.1.1.2.4.1.1 Validation of Route Elements	387	D
3.1.1.2.4.1.1 Validation of Route Elements	388	D
3.1.1.2.4.1.1 Validation of Route Elements	389	D
3.1.1.2.4.1.1 Validation of Route Elements	390	D
3.1.1.2.4.1.1 Validation of Route Elements	391	D

Specification Paragraph		Req. Number	Verification Method
3.1.1.2.4.1.1	Validation of Route Elements	392	D
3.1.1.2.4.1.1	Validation of Route Elements	393	D
3.1.1.2.4.1.1	Validation of Route Elements	394	D
3.1.1.2.4.1.1	Validation of Route Elements	395	D
3.1.1.2.4.1.1	Validation of Route Elements	396	D
3.1.1.2.4.1.1	Validation of Route Elements	397	D
3.1.1.2.4.1.1	Validation of Route Elements	398	D
3.1.1.2.4.1.1	Validation of Route Elements	399	D
3.1.1.2.4.1.1	Validation of Route Elements	400	D
3.1.1.2.4.1.1	Validation of Route Elements	401	D
3.1.1.2.4.1.1	Validation of Route Elements	402	D
3.1.1.2.4.1.1	Validation of Route Elements	403	D
3.1.1.2.4.1.1	Validation of Route Elements	404	D
3.1.1.2.4.1.1	Validation of Route Elements	405	D
3.1.1.2.4.1.1	Validation of Route Elements	406	D
3.1.1.2.4.1.1	Validation of Route Elements	407	D
3.1.1.2.4.1.1	Validation of Route Elements	408	D
3.1.1.2.4.1.1	Validation of Route Elements	409	D
3.1.1.2.4.1.1	Validation of Route Elements	410	D
3.1.1.2.4.1.1	Validation of Route Elements	411	D
3.1.1.2.4.1.1	Validation of Route Elements	412	D
3.1.1.2.4.1.1	Validation of Route Elements	413	D
3.1.1.2.4.1.1	Validation of Route Elements	414	D
3.1.1.2.4.1.1	Validation of Route Elements	415	D
3.1.1.2.4.1.1	Validation of Route Elements	416	D
3.1.1.2.4.1.1	Validation of Route Elements	417	D
3.1.1.2.4.1.1	Validation of Route Elements	418	D
3.1.1.2.4.1.1	Validation of Route Elements	419	D
3.1.1.2.4.1.2	Route Override	420	D
3.1.1.2.4.1.2	Route Override	421	D
3.1.1.2.4.1.2	Route Override	422	D
3.1.1.2.4.1.2	Route Override	423	D
3.1.1.2.4.1.2	Route Override	424	D
3.1.1.2.4.1.2	Route Override	425	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.4.1.2 Route Override	426	D
3.1.1.2.4.1.2 Route Override	427	D
3.1.1.2.4.1.2 Route Override	428	D
3.1.1.2.5 Process Domestic Flight Plans	429	D
3.1.1.2.5 Process Domestic Flight Plans	430	D
3.1.1.2.5 Process Domestic Flight Plans	431	D
3.1.1.2.5 Process Domestic Flight Plans	432	D
3.1.1.2.5 Process Domestic Flight Plans	433	D
3.1.1.2.5 Process Domestic Flight Plans	434	D
3.1.1.2.5 Process Domestic Flight Plans	435	D
3.1.1.2.5 Process Domestic Flight Plans	436	D
3.1.1.2.5 Process Domestic Flight Plans	437	D
3.1.1.2.5 Process Domestic Flight Plans	438	D
3.1.1.2.5 Process Domestic Flight Plans	439	D
3.1.1.2.5 Process Domestic Flight Plans	440	D
3.1.1.2.5 Process Domestic Flight Plans	441	D
3.1.1.2.5 Process Domestic Flight Plans	442	D
3.1.1.2.5 Process Domestic Flight Plans	443	D
3.1.1.2.5 Process Domestic Flight Plans	444	D
3.1.1.2.5 Process Domestic Flight Plans	445	D
3.1.1.2.5 Process Domestic Flight Plans	446	D
3.1.1.2.5 Process Domestic Flight Plans	447	D
3.1.1.2.5.1 Domestic Flight Plan Validation	448	D
3.1.1.2.5.1 Domestic Flight Plan Validation	449	D
3.1.1.2.5.1 Domestic Flight Plan Validation	450	D
3.1.1.2.5.1 Domestic Flight Plan Validation	451	D
3.1.1.2.5.2 Domestic Flight Plan Filing	452	D
3.1.1.2.5.2.1 In-Area Domestic Flight Plan Filing	--	
3.1.1.2.5.2.1.1 In-Area Domestic VFR Flight Plan Filing	453	D
3.1.1.2.5.2.1.2 In-Area Domestic IFR Flight Plan Filing	454	D
3.1.1.2.5.2.1.2 In-Area Domestic IFR Flight Plan Filing	455	D
3.1.1.2.5.2.1.2 In-Area Domestic IFR Flight Plan Filing	456	D
3.1.1.2.5.2.1.2 In-Area Domestic IFR Flight Plan Filing	457	D
3.1.1.2.5.2.1.2 In-Area Domestic IFR Flight Plan Filing	458	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.5.2.2 Out-of-Area Domestic Flight Plan Filing	--	
3.1.1.2.5.2.2.1 Out-of-Area Domestic VFR Flight Plan Filing	459	D
3.1.1.2.5.2.2.1 Out-of-Area Domestic VFR Flight Plan Filing	460	D
3.1.1.2.5.2.2.1 Out-of-Area Domestic VFR Flight Plan Filing	461	D
3.1.1.2.5.2.2.1 Out-of-Area Domestic VFR Flight Plan Filing	462	D
3.1.1.2.5.2.2.2 Out-of-Area Domestic IFR Flight Plan Filing	463	D
3.1.1.2.5.2.2.2 Out-of-Area Domestic IFR Flight Plan Filing	464	D
3.1.1.2.5.2.2.2 Out-of-Area Domestic IFR Flight Plan Filing	465	D
3.1.1.2.5.2.2.2 Out-of-Area Domestic IFR Flight Plan Filing	466	D
3.1.1.2.5.2.2.2 Out-of-Area Domestic IFR Flight Plan Filing	467	D
3.1.1.2.5.3 Domestic Flight Plan Activation	--	
3.1.1.2.5.3.1 Domestic VFR Flight Plan Activation	468	D
3.1.1.2.5.3.1 Domestic VFR Flight Plan Activation	469	D
3.1.1.2.5.3.1 Domestic VFR Flight Plan Activation	470	D
3.1.1.2.5.3.2 Domestic IFR Flight Plan Activation	471	D
3.1.1.2.5.3.2 Domestic IFR Flight Plan Activation	472	D
3.1.1.2.5.3.2 Domestic IFR Flight Plan Activation	473	D
3.1.1.2.5.4 Domestic Flight Plan Amendment	474	D
3.1.1.2.5.4 Domestic Flight Plan Amendment	475	D
3.1.1.2.5.4 Domestic Flight Plan Amendment	476	D
3.1.1.2.5.5 Domestic Flight Plan Closure	477	D
3.1.1.2.5.5 Domestic Flight Plan Closure	478	D
3.1.1.2.5.5 Domestic Flight Plan Closure	479	D
3.1.1.2.5.6 Domestic Flight Plan Cancellation	480	D
3.1.1.2.5.6 Domestic Flight Plan Cancellation	481	D
3.1.1.2.5.6 Domestic Flight Plan Cancellation	482	D
3.1.1.2.5.6 Domestic Flight Plan Cancellation	483	D
3.1.1.2.5.6 Domestic Flight Plan Cancellation	484	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.5.6 Domestic Flight Plan Cancellation	485	D
3.1.1.2.5.6 Domestic Flight Plan Cancellation	486	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	487	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	488	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	489	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	490	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	491	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	492	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	493	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	494	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	495	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	496	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	497	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	498	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	499	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	500	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	501	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	502	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	503	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	504	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	505	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	506	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	507	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	508	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	509	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	510	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	511	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	512	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	513	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	514	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	515	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	516	D
3.1.1.2.6 Process International Civil Aviation Organization (ICAO) Flight Plans	517	D
3.1.1.2.6.1 ICAO Flight Plan Validation	518	D
3.1.1.2.6.1 ICAO Flight Plan Validation	519	D
3.1.1.2.6.1 ICAO Flight Plan Validation	520	D
3.1.1.2.6.1 ICAO Flight Plan Validation	521	D
3.1.1.2.6.2 ICAO Flight Plan Filing	522	D
3.1.1.2.6.2.1 In-Area ICAO Flight Plan Filing	--	
3.1.1.2.6.2.1.1 In-Area ICAO VFR Flight Plan Filing	523	D
3.1.1.2.6.2.1.1 In-Area ICAO VFR Flight Plan Filing	524	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.6.2.1.1 In-Area ICAO VFR Flight Plan Filing	525	D
3.1.1.2.6.2.1.2 In-Area ICAO IFR Flight Plan Filing	526	D
3.1.1.2.6.2.1.2 In-Area ICAO IFR Flight Plan Filing	527	D
3.1.1.2.6.2.1.2 In-Area ICAO IFR Flight Plan Filing	528	D
3.1.1.2.6.2.1.2 In-Area ICAO IFR Flight Plan Filing	529	D
3.1.1.2.6.2.1.2 In-Area ICAO IFR Flight Plan Filing	530	D
3.1.1.2.6.2.1.2 In-Area ICAO IFR Flight Plan Filing	531	D
3.1.1.2.6.2.2 Out-of-Area ICAO Flight Plan Filing	--	
3.1.1.2.6.2.2.1 Out-of-Area ICAO VFR Flight Plan Filing	532	D
3.1.1.2.6.2.2.1 Out-of-Area ICAO VFR Flight Plan Filing	533	D
3.1.1.2.6.2.2.1 Out-of-Area ICAO VFR Flight Plan Filing	534	D
3.1.1.2.6.2.2.1 Out-of-Area ICAO VFR Flight Plan Filing	535	D
3.1.1.2.6.2.2.1 Out-of-Area ICAO VFR Flight Plan Filing	536	D
3.1.1.2.6.2.2.2 Out-of-Area ICAO IFR Flight Plan Filing	537	D
3.1.1.2.6.2.2.2 Out-of-Area ICAO IFR Flight Plan Filing	538	D
3.1.1.2.6.2.2.2 Out-of-Area ICAO IFR Flight Plan Filing	539	D
3.1.1.2.6.2.2.2 Out-of-Area ICAO IFR Flight Plan Filing	540	D
3.1.1.2.6.2.2.2 Out-of-Area ICAO IFR Flight Plan Filing	541	D
3.1.1.2.6.2.2.2 Out-of-Area ICAO IFR Flight Plan Filing	542	D
3.1.1.2.6.3 ICAO Flight Plan Activation	--	
3.1.1.2.6.3.1 ICAO VFR Flight Plan Activation	543	D
3.1.1.2.6.3.1 ICAO VFR Flight Plan Activation	544	D
3.1.1.2.6.3.1 ICAO VFR Flight Plan Activation	545	D
3.1.1.2.6.3.2 ICAO IFR Flight Plan Activation	546	D
3.1.1.2.6.3.2 ICAO IFR Flight Plan Activation	547	D
3.1.1.2.6.3.2 ICAO IFR Flight Plan Activation	548	D
3.1.1.2.6.4 ICAO Flight Plan Amendment	549	D
3.1.1.2.6.4 ICAO Flight Plan Amendment	550	D
3.1.1.2.6.4 ICAO Flight Plan Amendment	551	D
3.1.1.2.6.5 ICAO Flight Plan Closure	552	D
3.1.1.2.6.5 ICAO Flight Plan Closure	553	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.6.5 ICAO Flight Plan Closure	554	D
3.1.1.2.6.6 ICAO Flight Plan Cancellation	555	D
3.1.1.2.6.6 ICAO Flight Plan Cancellation	556	D
3.1.1.2.6.6 ICAO Flight Plan Cancellation	557	D
3.1.1.2.6.6 ICAO Flight Plan Cancellation	558	D
3.1.1.2.6.6 ICAO Flight Plan Cancellation	559	D
3.1.1.2.6.6 ICAO Flight Plan Cancellation	560	D
3.1.1.2.6.6 ICAO Flight Plan Cancellation	561	D
3.1.1.2.6.7 ICAO Composite Flight Plan Processing	562	D
3.1.1.2.6.7 ICAO Composite Flight Plan Processing	563	D
3.1.1.2.6.7 ICAO Composite Flight Plan Processing	564	D
3.1.1.2.7 Process Military Flight Plans	--	
3.1.1.2.7.1 Military Flight Plan Validation	565	D
3.1.1.2.7.1 Military Flight Plan Validation	566	D
3.1.1.2.7.1 Military Flight Plan Validation	567	D
3.1.1.2.7.1 Military Flight Plan Validation	568	D
3.1.1.2.7.2 Military Flight Plan Filing	569	D
3.1.1.2.7.2.1 In-Area Military Flight Plan Filing	--	
3.1.1.2.7.2.1.1 In-Area Military VFR Flight Plan Filing	570	D
3.1.1.2.7.2.1.2 In-Area Military IFR Flight Plan Filing	571	D
3.1.1.2.7.2.1.2 In-Area Military IFR Flight Plan Filing	572	D
3.1.1.2.7.2.1.2 In-Area Military IFR Flight Plan Filing	573	D
3.1.1.2.7.2.1.2 In-Area Military IFR Flight Plan Filing	574	D
3.1.1.2.7.2.2 Out-of-Area Military Flight Plan Filing	--	
3.1.1.2.7.2.2.1 Out-of-Area Military VFR Flight Plan Filing	575	D
3.1.1.2.7.2.2.1 Out-of-Area Military VFR Flight Plan Filing	576	D
3.1.1.2.7.2.2.1 Out-of-Area Military VFR Flight Plan Filing	577	D
3.1.1.2.7.2.2.1 Out-of-Area Military VFR Flight Plan Filing	578	D
3.1.1.2.7.2.2.2 Out-of-Area Military IFR Flight Plan Filing	579	D
3.1.1.2.7.2.2.2 Out-of-Area Military IFR Flight Plan Filing	580	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.7.2.2.2 Out-of-Area Military IFR Flight Plan Filing	581	D
3.1.1.2.7.2.2.2 Out-of-Area Military IFR Flight Plan Filing	582	D
3.1.1.2.7.2.2.2 Out-of-Area Military IFR Flight Plan Filing	583	D
3.1.1.2.7.2.3 Military Stopover Flight Plan Filing	--	
3.1.1.2.7.2.3.1 VFR Military Stopover Flight Plan Filing	584	D
3.1.1.2.7.2.3.1 VFR Military Stopover Flight Plan Filing	585	D
3.1.1.2.7.2.3.2 IFR Military Stopover Flight Plan Filing	586	D
3.1.1.2.7.2.3.2 IFR Military Stopover Flight Plan Filing	587	D
3.1.1.2.7.3 Military Flight Plan Activation	--	
3.1.1.2.7.3.1 Military VFR Flight Plan Activation	588	D
3.1.1.2.7.3.1 Military VFR Flight Plan Activation	589	D
3.1.1.2.7.3.1 Military VFR Flight Plan Activation	590	D
3.1.1.2.7.3.2 Military IFR Flight Plan Activation	591	D
3.1.1.2.7.3.2 Military IFR Flight Plan Activation	592	D
3.1.1.2.7.3.2 Military IFR Flight Plan Activation	593	D
3.1.1.2.7.3.3 Military Stopover Flight Plan Activation	--	
3.1.1.2.7.3.3.1 Military VFR Stopover Flight Plan Activation	594	D
3.1.1.2.7.3.3.1 Military VFR Stopover Flight Plan Activation	595	D
3.1.1.2.7.3.3.2 Military IFR Stopover Flight Plan Activation	596	D
3.1.1.2.7.3.3.2 Military IFR Stopover Flight Plan Activation	597	D
3.1.1.2.7.4 Military Flight Plan Amendment	598	D
3.1.1.2.7.4 Military Flight Plan Amendment	599	D
3.1.1.2.7.4 Military Flight Plan Amendment	600	D
3.1.1.2.7.5 Military Flight Plan Closure	601	D
3.1.1.2.7.5 Military Flight Plan Closure	602	D
3.1.1.2.7.5 Military Flight Plan Closure	603	D
3.1.1.2.7.6 Military Flight Plan Cancellation	604	D
3.1.1.2.7.6 Military Flight Plan Cancellation	605	D
3.1.1.2.7.6 Military Flight Plan Cancellation	606	D
3.1.1.2.7.6 Military Flight Plan Cancellation	607	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.7.6 Military Flight Plan Cancellation	608	D
3.1.1.2.7.6 Military Flight Plan Cancellation	609	D
3.1.1.2.7.6 Military Flight Plan Cancellation	610	D
3.1.1.2.8 Process Stereo Flight Plans	--	
3.1.1.2.8.1 Stereo Flight Plan Validation	611	D
3.1.1.2.8.1 Stereo Flight Plan Validation	612	D
3.1.1.2.8.1 Stereo Flight Plan Validation	613	D
3.1.1.2.8.1 Stereo Flight Plan Validation	614	D
3.1.1.2.8.2 Stereo Flight Plan Filing	615	D
3.1.1.2.8.2 Stereo Flight Plan Filing	616	D
3.1.1.2.8.2 Stereo Flight Plan Filing	617	D
3.1.1.2.8.2 Stereo Flight Plan Filing	618	D
3.1.1.2.8.2 Stereo Flight Plan Filing	619	D
3.1.1.2.8.3 Stereo Flight Plan Amendment	620	D
3.1.1.2.8.3 Stereo Flight Plan Amendment	621	D
3.1.1.2.8.3 Stereo Flight Plan Amendment	622	D
3.1.1.2.8.4 Stereo Flight Plan Cancellation	623	D
3.1.1.2.8.4 Stereo Flight Plan Cancellation	624	D
3.1.1.2.8.4 Stereo Flight Plan Cancellation	625	D
3.1.1.2.8.4 Stereo Flight Plan Cancellation	626	D
3.1.1.2.8.4 Stereo Flight Plan Cancellation	627	D
3.1.1.2.9 Process DVFR Flight Plans	--	
3.1.1.2.9.1 DVFR Flight Plan Validation	628	D
3.1.1.2.9.1 DVFR Flight Plan Validation	629	D
3.1.1.2.9.1 DVFR Flight Plan Validation	630	D
3.1.1.2.9.1 DVFR Flight Plan Validation	631	D
3.1.1.2.9.2 DVFR Flight Plan Filing	632	D
3.1.1.2.9.2 DVFR Flight Plan Filing	633	D
3.1.1.2.9.2 DVFR Flight Plan Filing	634	D
3.1.1.2.9.3 DVFR Flight Plan Activation	635	D
3.1.1.2.9.3 DVFR Flight Plan Activation	636	D
3.1.1.2.9.3 DVFR Flight Plan Activation	637	D
3.1.1.2.9.3 DVFR Flight Plan Activation	638	D
3.1.1.2.9.3 DVFR Flight Plan Activation	639	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.9.4 DVFR Flight Plan Amendment	640	D
3.1.1.2.9.4 DVFR Flight Plan Amendment	641	D
3.1.1.2.9.4 DVFR Flight Plan Amendment	642	D
3.1.1.2.9.5 DVFR Flight Plan Closure	643	D
3.1.1.2.9.5 DVFR Flight Plan Closure	644	D
3.1.1.2.9.5 DVFR Flight Plan Closure	645	D
3.1.1.2.9.6 DVFR Flight Plan Cancellation	646	D
3.1.1.2.9.6 DVFR Flight Plan Cancellation	647	D
3.1.1.2.9.6 DVFR Flight Plan Cancellation	648	D
3.1.1.2.9.6 DVFR Flight Plan Cancellation	649	D
3.1.1.2.9.6 DVFR Flight Plan Cancellation	650	D
3.1.1.2.9.6 DVFR Flight Plan Cancellation	651	D
3.1.1.2.9.6 DVFR Flight Plan Cancellation	652	D
3.1.1.2.10 Preferential Routes	653	D
3.1.1.2.10 Preferential Routes	654	D
3.1.1.2.10 Preferential Routes	655	D
3.1.1.2.10 Preferential Routes	656	D
3.1.1.2.10 Preferential Routes	657	D
3.1.1.2.11 Master Flight Plans	658	D
3.1.1.2.11 Master Flight Plans	659	D
3.1.1.2.11 Master Flight Plans	660	D
3.1.1.2.11 Master Flight Plans	661	D
3.1.1.2.11 Master Flight Plans	662	D
3.1.1.2.11 Master Flight Plans	663	D
3.1.1.2.11 Master Flight Plans	664	D
3.1.1.2.11 Master Flight Plans	665	D
3.1.1.2.12 Aircraft Movement Message Processing	--	
3.1.1.2.12.1 Aircraft Movement Messages Transmitted	666	D
3.1.1.2.12.1 Aircraft Movement Messages Transmitted	667	D
3.1.1.2.12.1 Aircraft Movement Messages Transmitted	668	D
3.1.1.2.12.1 Aircraft Movement Messages Transmitted	669	D
3.1.1.2.12.1 Aircraft Movement Messages Transmitted	670	D
3.1.1.2.12.1 Aircraft Movement Messages Transmitted	671	D
3.1.1.2.12.1 Aircraft Movement Messages Transmitted	672	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.12.1.1 Civil Domestic Flight Notification Message	673	D
3.1.1.2.12.1.1 Civil Domestic Flight Notification Message	674	D
3.1.1.2.12.1.1 Civil Domestic Flight Notification Message	675	D
3.1.1.2.12.1.2 Military Flight Notification Message	676	D
3.1.1.2.12.1.2 Military Flight Notification Message	677	D
3.1.1.2.12.1.2 Military Flight Notification Message	678	D
3.1.1.2.12.1.3 Departure Message	679	D
3.1.1.2.12.1.3 Departure Message	680	D
3.1.1.2.12.1.3 Departure Message	681	D
3.1.1.2.12.1.4 ICAO Flight Plan Message	682	D
3.1.1.2.12.1.4 ICAO Flight Plan Message	683	D
3.1.1.2.12.1.4 ICAO Flight Plan Message	684	D
3.1.1.2.12.1.5 ICAO Departure Message	685	D
3.1.1.2.12.1.5 ICAO Departure Message	686	D
3.1.1.2.12.1.5 ICAO Departure Message	687	D
3.1.1.2.12.1.6 IFR Flight Plan Message	688	D
3.1.1.2.12.1.6 IFR Flight Plan Message	689	D
3.1.1.2.12.1.6 IFR Flight Plan Message	690	D
3.1.1.2.12.1.7 Stereo Flight Plan Message	691	D
3.1.1.2.12.1.7 Stereo Flight Plan Message	692	D
3.1.1.2.12.1.7 Stereo Flight Plan Message	693	D
3.1.1.2.12.1.8 DVFR Flight Plan Message	694	D
3.1.1.2.12.1.8 DVFR Flight Plan Message	695	D
3.1.1.2.12.1.8 DVFR Flight Plan Message	696	D
3.1.1.2.12.1.9 Proposed VFR Flight Plan Message	697	D
3.1.1.2.12.1.9 Proposed VFR Flight Plan Message	698	D
3.1.1.2.12.1.9 Proposed VFR Flight Plan Message	699	D
3.1.1.2.12.1.10 Proposed IFR Flight Plan Message	700	D
3.1.1.2.12.1.10 Proposed IFR Flight Plan Message	701	D
3.1.1.2.12.1.10 Proposed IFR Flight Plan Message	702	D
3.1.1.2.12.1.11 Cancellation Message	703	D
3.1.1.2.12.1.11 Cancellation Message	704	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.12.1.11 Cancellation Message	705	D
3.1.1.2.12.1.12 Arrival Message	706	D
3.1.1.2.12.1.12 Arrival Message	707	D
3.1.1.2.12.1.12 Arrival Message	708	D
3.1.1.2.12.1.13 Change ETA Message	709	D
3.1.1.2.12.1.13 Change ETA Message	710	D
3.1.1.2.12.1.13 Change ETA Message	711	D
3.1.1.2.12.1.14 Roger Message	712	D
3.1.1.2.12.1.14 Roger Message	713	D
3.1.1.2.12.1.14 Roger Message	714	D
3.1.1.2.12.2 Aircraft Movement Messages Received	--	
3.1.1.2.12.2.1 Civil Domestic Flight Notification Message	715	D
3.1.1.2.12.2.1 Civil Domestic Flight Notification Message	716	D
3.1.1.2.12.2.1 Civil Domestic Flight Notification Message	717	D
3.1.1.2.12.2.1 Civil Domestic Flight Notification Message	718	D
3.1.1.2.12.2.1 Civil Domestic Flight Notification Message	719	D
3.1.1.2.12.2.1 Civil Domestic Flight Notification Message	720	D
3.1.1.2.12.2.2 Military Flight Notification Message	721	D
3.1.1.2.12.2.2 Military Flight Notification Message	722	D
3.1.1.2.12.2.2 Military Flight Notification Message	723	D
3.1.1.2.12.2.2 Military Flight Notification Message	724	D
3.1.1.2.12.2.2 Military Flight Notification Message	725	D
3.1.1.2.12.2.2 Military Flight Notification Message	726	D
3.1.1.2.12.2.3 Departure Message	727	D
3.1.1.2.12.2.3 Departure Message	728	D
3.1.1.2.12.2.3 Departure Message	729	D
3.1.1.2.12.2.3 Departure Message	730	D
3.1.1.2.12.2.4 ICAO Flight Plan Message	731	D
3.1.1.2.12.2.4 ICAO Flight Plan Message	732	D
3.1.1.2.12.2.4 ICAO Flight Plan Message	733	D

Specification Paragraph		Req. Number	Verification Method
3.1.1.2.12.2.4	ICAO Flight Plan Message	734	D
3.1.1.2.12.2.4	ICAO Flight Plan Message	735	D
3.1.1.2.12.2.4	ICAO Flight Plan Message	736	D
3.1.1.2.12.2.5	ICAO Departure Message	737	D
3.1.1.2.12.2.5	ICAO Departure Message	738	D
3.1.1.2.12.2.5	ICAO Departure Message	739	D
3.1.1.2.12.2.5	ICAO Departure Message	740	D
3.1.1.2.12.2.5	ICAO Departure Message	741	D
3.1.1.2.12.2.5	ICAO Departure Message	742	D
3.1.1.2.12.2.5	ICAO Departure Message	743	D
3.1.1.2.12.2.6	Proposed VFR Flight Plan Message	744	D
3.1.1.2.12.2.6	Proposed VFR Flight Plan Message	745	D
3.1.1.2.12.2.6	Proposed VFR Flight Plan Message	746	D
3.1.1.2.12.2.6	Proposed VFR Flight Plan Message	747	D
3.1.1.2.12.2.6	Proposed VFR Flight Plan Message	748	D
3.1.1.2.12.2.6	Proposed VFR Flight Plan Message	749	D
3.1.1.2.12.2.6	Proposed VFR Flight Plan Message	750	D
3.1.1.2.12.2.6	Proposed VFR Flight Plan Message	751	D
3.1.1.2.12.2.7	Proposed IFR Flight Plan Message	752	D
3.1.1.2.12.2.7	Proposed IFR Flight Plan Message	753	D
3.1.1.2.12.2.7	Proposed IFR Flight Plan Message	754	D
3.1.1.2.12.2.7	Proposed IFR Flight Plan Message	755	D
3.1.1.2.12.2.7	Proposed IFR Flight Plan Message	756	D
3.1.1.2.12.2.7	Proposed IFR Flight Plan Message	757	D
3.1.1.2.12.2.7	Proposed IFR Flight Plan Message	758	D
3.1.1.2.12.2.7	Proposed IFR Flight Plan Message	759	D
3.1.1.2.12.2.8	Cancellation Message	760	D
3.1.1.2.12.2.8	Cancellation Message	761	D
3.1.1.2.12.2.8	Cancellation Message	762	D
3.1.1.2.12.2.8	Cancellation Message	763	D
3.1.1.2.12.2.8	Cancellation Message	764	D
3.1.1.2.12.2.9	Arrival Message	765	D
3.1.1.2.12.2.9	Arrival Message	766	D
3.1.1.2.12.2.9	Arrival Message	767	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.12.2.9 Arrival Message	768	D
3.1.1.2.12.2.9 Arrival Message	769	D
3.1.1.2.12.2.10 Change ETA Message	770	D
3.1.1.2.12.2.10 Change ETA Message	771	D
3.1.1.2.12.2.10 Change ETA Message	772	D
3.1.1.2.12.2.10 Change ETA Message	773	D
3.1.1.2.12.2.10 Change ETA Message	774	D
3.1.1.2.12.2.10 Change ETA Message	775	D
3.1.1.2.12.2.10 Change ETA Message	776	D
3.1.1.2.12.2.11 Roger Message	777	D
3.1.1.2.12.2.11 Roger Message	778	D
3.1.1.2.12.2.11 Roger Message	779	D
3.1.1.2.12.2.11 Roger Message	780	D
3.1.1.2.12.2.11 Roger Message	781	D
3.1.1.2.12.2.11 Roger Message	782	D
3.1.1.2.12.2.12 Reject Message	783	D
3.1.1.2.12.2.12 Reject Message	784	D
3.1.1.2.12.2.12 Reject Message	785	D
3.1.1.2.12.2.12 Reject Message	786	D
3.1.1.2.12.2.12 Reject Message	787	D
3.1.1.2.12.2.12 Reject Message	788	D
3.1.1.2.12.2.12 Reject Message	789	D
3.1.1.2.12.2.13 Error Message	790	D
3.1.1.2.12.2.13 Error Message	791	D
3.1.1.2.12.2.13 Error Message	792	D
3.1.1.2.12.2.13 Error Message	793	D
3.1.1.2.12.2.13 Error Message	794	D
3.1.1.2.12.2.13 Error Message	795	D
3.1.1.2.12.2.13 Error Message	796	D
3.1.1.2.13 Control Message Processing	--	
3.1.1.2.13.1 Control Messages Received	--	
3.1.1.2.13.1.1 SUA Messages	797	D
3.1.1.2.13.1.1.1 IFR Military Training Route (IR) Messages	798	D
3.1.1.2.13.1.1.1 IFR Military Training Route (IR)	799	D

Specification Paragraph	Req. Number	Verification Method
Messages		
3.1.1.2.13.1.1.1 IFR Military Training Route (IR) Messages	800	D
3.1.1.2.13.1.1.1 IFR Military Training Route (IR) Messages	801	D
3.1.1.2.13.1.1.1 IFR Military Training Route (IR) Messages	802	D
3.1.1.2.13.1.1.2 VFR Military Training Route (VR) Messages	803	D
3.1.1.2.13.1.1.2 VFR Military Training Route (VR) Messages	804	D
3.1.1.2.13.1.1.2 VFR Military Training Route (VR) Messages	805	D
3.1.1.2.13.1.1.2 VFR Military Training Route (VR) Messages	806	D
3.1.1.2.13.1.1.2 VFR Military Training Route (VR) Messages	807	D
3.1.1.2.13.1.1.3 MOA Messages	808	D
3.1.1.2.13.1.1.3 MOA Messages	809	D
3.1.1.2.13.1.1.3 MOA Messages	810	D
3.1.1.2.13.1.1.3 MOA Messages	811	D
3.1.1.2.13.1.1.3 MOA Messages	812	D
3.1.1.2.13.1.1.3 MOA Messages	813	D
3.1.1.2.13.1.1.3 MOA Messages	814	D
3.1.1.2.13.1.1.3 MOA Messages	815	D
3.1.1.2.13.1.1.3 MOA Messages	816	D
3.1.1.2.13.1.1.3 MOA Messages	817	D
3.1.1.2.13.1.1.4 Warning Area Messages	818	D
3.1.1.2.13.1.1.4 Warning Area Messages	819	D
3.1.1.2.13.1.1.4 Warning Area Messages	820	D
3.1.1.2.13.1.1.4 Warning Area Messages	821	D
3.1.1.2.13.1.1.4 Warning Area Messages	822	D
3.1.1.2.13.1.1.5 Controlled Firing Areas Messages	823	D
3.1.1.2.13.1.1.5 Controlled Firing Areas Messages	824	D
3.1.1.2.13.1.1.5 Controlled Firing Areas Messages	825	D
3.1.1.2.13.1.1.5 Controlled Firing Areas Messages	826	D
3.1.1.2.13.1.1.5 Controlled Firing Areas Messages	827	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.13.1.2 ATCSCC Messages	828	D
3.1.1.2.13.1.2 ATCSCC Messages	829	D
3.1.1.2.13.1.2 ATCSCC Messages	830	D
3.1.1.2.13.1.2 ATCSCC Messages	831	D
3.1.1.2.13.1.2 ATCSCC Messages	832	D
3.1.1.2.13.1.2 ATCSCC Messages	833	D
3.1.1.2.13.1.2 ATCSCC Messages	834	D
3.1.1.2.13.1.2 ATCSCC Messages	835	D
3.1.1.2.13.1.2 ATCSCC Messages	836	D
3.1.1.2.13.1.2 ATCSCC Messages	837	D
3.1.1.2.13.1.2 ATCSCC Messages	838	D
3.1.1.2.13.1.2 ATCSCC Messages	839	D
3.1.1.2.13.1.3 LE Messages	840	D
3.1.1.2.13.1.3 LE Messages	841	D
3.1.1.2.13.1.3 LE Messages	842	D
3.1.1.2.13.1.3 LE Messages	843	D
3.1.1.2.13.1.3 LE Messages	844	D
3.1.1.2.13.1.3 LE Messages	845	D
3.1.1.2.13.1.3 LE Messages	846	D
3.1.1.2.13.1.3 LE Messages	847	D
3.1.1.2.13.1.3 LE Messages	848	D
3.1.1.2.13.1.3 LE Messages	849	D
3.1.1.2.13.1.3 LE Messages	850	D
3.1.1.2.13.1.3 LE Messages	851	D
3.1.1.2.13.1.3 LE Messages	852	D
3.1.1.2.13.1.3 LE Messages	853	D
3.1.1.2.13.1.3 LE Messages	854	D
3.1.1.2.13.1.3 LE Messages	855	D
3.1.1.2.13.1.3 LE Messages	856	D
3.1.1.2.14 Flight Plan Conversion	--	
3.1.1.2.14.1 ICAO to Domestic Conversion	857	D
3.1.1.2.14.1 ICAO to Domestic Conversion	858	D
3.1.1.2.14.1 ICAO to Domestic Conversion	859	D
3.1.1.2.14.1 ICAO to Domestic Conversion	860	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.14.1 ICAO to Domestic Conversion	861	D
3.1.1.2.14.1 ICAO to Domestic Conversion	862	D
3.1.1.2.14.1 ICAO to Domestic Conversion	863	D
3.1.1.2.14.1 ICAO to Domestic Conversion	864	D
3.1.1.2.14.1 ICAO to Domestic Conversion	865	D
3.1.1.2.14.1 ICAO to Domestic Conversion	866	D
3.1.1.2.14.1 ICAO to Domestic Conversion	867	D
3.1.1.2.14.2 Domestic to ICAO Conversion	868	D
3.1.1.2.14.2 Domestic to ICAO Conversion	869	D
3.1.1.2.14.2 Domestic to ICAO Conversion	870	D
3.1.1.2.14.2 Domestic to ICAO Conversion	871	D
3.1.1.2.14.2 Domestic to ICAO Conversion	872	D
3.1.1.2.14.2 Domestic to ICAO Conversion	873	D
3.1.1.2.14.2 Domestic to ICAO Conversion	874	D
3.1.1.2.14.2 Domestic to ICAO Conversion	875	D
3.1.1.2.14.2 Domestic to ICAO Conversion	876	D
3.1.1.2.14.2 Domestic to ICAO Conversion	877	D
3.1.1.2.14.2 Domestic to ICAO Conversion	878	D
3.1.1.2.14.2 Domestic to ICAO Conversion	879	D
3.1.1.2.14.2 Domestic to ICAO Conversion	880	D
3.1.1.2.15 Flight Plan Information History	881	D
3.1.1.2.15.1 Display History of User Information	883	D
3.1.1.2.15.1 Display History of User Information	884	D
3.1.1.2.15.1 Display History of User Information	885	D
3.1.1.2.15.1 Display History of User Information	886	D
3.1.1.2.15.1 Display History of User Information	887	D
3.1.1.2.15.1 Display History of User Information	888	D
3.1.1.2.15.1 Display History of User Information	889	D
3.1.1.2.15.1 Display History of User Information	890	D
3.1.1.2.15.1 Display History of User Information	891	D
3.1.1.2.15.2 Display Local Facility Completed Flight Data Transactions	892	D
3.1.1.2.15.2 Display Local Facility Completed Flight Data Transactions	893	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.15.2 Display Local Facility Completed Flight Data Transactions	894	D
3.1.1.2.15.2 Display Local Facility Completed Flight Data Transactions	895	D
3.1.1.2.15.2 Display Local Facility Completed Flight Data Transactions	896	D
3.1.1.2.16 Display Current Flight Plan	897	D
3.1.1.2.16 Display Current Flight Plan	898	D
3.1.1.2.16 Display Current Flight Plan	899	D
3.1.1.2.16 Display Current Flight Plan	900	D
3.1.1.2.16.1 Display Partial Flight Plans	901	D
3.1.1.2.16.1 Display Partial Flight Plans	902	D
3.1.1.2.16.1 Display Partial Flight Plans	903	D
3.1.1.2.16.1 Display Partial Flight Plans	904	D
3.1.1.2.16.1 Display Partial Flight Plans	905	D
3.1.1.2.16.1 Display Partial Flight Plans	906	D
3.1.1.2.16.1 Display Partial Flight Plans	907	D
3.1.1.2.16.1 Display Partial Flight Plans	908	D
3.1.1.2.16.1 Display Partial Flight Plans	909	D
3.1.1.2.16.1 Display Partial Flight Plans	910	D
3.1.1.2.16.1 Display Partial Flight Plans	911	D
3.1.1.2.16.1 Display Partial Flight Plans	912	D
3.1.1.2.16.1 Display Partial Flight Plans	913	D
3.1.1.2.16.1 Display Partial Flight Plans	914	D
3.1.1.2.16.1 Display Partial Flight Plans	915	D
3.1.1.2.16.1 Display Partial Flight Plans	916	D
3.1.1.2.17 Display Flight Plan Lists	--	
3.1.1.2.17.1 Display Prestored Flight Plan List	917	D
3.1.1.2.17.1 Display Prestored Flight Plan List	918	D
3.1.1.2.17.1 Display Prestored Flight Plan List	919	D
3.1.1.2.17.1 Display Prestored Flight Plan List	920	D
3.1.1.2.17.1 Display Prestored Flight Plan List	921	D
3.1.1.2.17.1 Display Prestored Flight Plan List	922	D
3.1.1.2.17.1 Display Prestored Flight Plan List	923	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.17.1 Display Prestored Flight Plan List	924	D
3.1.1.2.17.1 Display Prestored Flight Plan List	925	D
3.1.1.2.17.1 Display Prestored Flight Plan List	926	D
3.1.1.2.17.1 Display Prestored Flight Plan List	927	D
3.1.1.2.17.1 Display Prestored Flight Plan List	928	D
3.1.1.2.17.1 Display Prestored Flight Plan List	929	D
3.1.1.2.17.1 Display Prestored Flight Plan List	930	D
3.1.1.2.17.2 Display Proposed Flight Plan List	931	D
3.1.1.2.17.2 Display Proposed Flight Plan List	932	D
3.1.1.2.17.2 Display Proposed Flight Plan List	933	D
3.1.1.2.17.2 Display Proposed Flight Plan List	934	D
3.1.1.2.17.2 Display Proposed Flight Plan List	935	D
3.1.1.2.17.2 Display Proposed Flight Plan List	936	D
3.1.1.2.17.2 Display Proposed Flight Plan List	937	D
3.1.1.2.17.2 Display Proposed Flight Plan List	938	D
3.1.1.2.17.2 Display Proposed Flight Plan List	939	D
3.1.1.2.17.2 Display Proposed Flight Plan List	940	D
3.1.1.2.17.2 Display Proposed Flight Plan List	941	D
3.1.1.2.17.2 Display Proposed Flight Plan List	942	D
3.1.1.2.17.3 Display Suspense List	943	D
3.1.1.2.17.3 Display Suspense List	944	D
3.1.1.2.17.3 Display Suspense List	945	D
3.1.1.2.17.3 Display Suspense List	946	D
3.1.1.2.17.3 Display Suspense List	947	D
3.1.1.2.17.3 Display Suspense List	948	D
3.1.1.2.17.3 Display Suspense List	949	D
3.1.1.2.17.3 Display Suspense List	950	D
3.1.1.2.17.3 Display Suspense List	951	D
3.1.1.2.17.3 Display Suspense List	952	D
3.1.1.2.17.3 Display Suspense List	953	D
3.1.1.2.17.3 Display Suspense List	954	D
3.1.1.2.17.3 Display Suspense List	955	D
3.1.1.2.17.3 Display Suspense List	956	D
3.1.1.2.17.3 Display Suspense List	957	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.17.4 Display Inbound Flight Plan List	958	D
3.1.1.2.17.4 Display Inbound Flight Plan List	959	D
3.1.1.2.17.4 Display Inbound Flight Plan List	960	D
3.1.1.2.17.4 Display Inbound Flight Plan List	961	D
3.1.1.2.17.4 Display Inbound Flight Plan List	962	D
3.1.1.2.17.4 Display Inbound Flight Plan List	963	D
3.1.1.2.17.4 Display Inbound Flight Plan List	964	D
3.1.1.2.17.4 Display Inbound Flight Plan List	965	D
3.1.1.2.17.4 Display Inbound Flight Plan List	966	D
3.1.1.2.17.4 Display Inbound Flight Plan List	967	D
3.1.1.2.17.4 Display Inbound Flight Plan List	968	D
3.1.1.2.17.4 Display Inbound Flight Plan List	969	D
3.1.1.2.17.4 Display Inbound Flight Plan List	970	D
3.1.1.2.17.4 Display Inbound Flight Plan List	971	D
3.1.1.2.17.4 Display Inbound Flight Plan List	972	D
3.1.1.2.17.4 Display Inbound Flight Plan List	977	D
3.1.1.2.17.4 Display Inbound Flight Plan List	978	D
3.1.1.2.17.5 Display Inactive Flight Plan List	979	D
3.1.1.2.17.5 Display Inactive Flight Plan List	980	D
3.1.1.2.17.5 Display Inactive Flight Plan List	981	D
3.1.1.2.17.5 Display Inactive Flight Plan List	982	D
3.1.1.2.17.5 Display Inactive Flight Plan List	983	D
3.1.1.2.17.5 Display Inactive Flight Plan List	984	D
3.1.1.2.17.5 Display Inactive Flight Plan List	985	D
3.1.1.2.18 General Message Processing	--	
3.1.1.2.18.1 General Messages Transmitted	986	D
3.1.1.2.18.1 General Messages Transmitted	987	D
3.1.1.2.18.1 General Messages Transmitted	988	D
3.1.1.2.18.1 General Messages Transmitted	989	D
3.1.1.2.18.1 General Messages Transmitted	990	D
3.1.1.2.18.1 General Messages Transmitted	991	D
3.1.1.2.18.1 General Messages Transmitted	992	D
3.1.1.2.18.1 General Messages Transmitted	993	D
3.1.1.2.18.1 General Messages Transmitted	994	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.2.18.1 General Messages Transmitted	995	D
3.1.1.2.18.1 General Messages Transmitted	996	D
3.1.1.2.18.2 General Messages Received	997	D
3.1.1.2.18.2 General Messages Received	998	D
3.1.1.2.18.2 General Messages Received	999	D
3.1.1.2.18.2 General Messages Received	1000	D
3.1.1.3 In-Flight Processing	--	
3.1.1.3.1 In-Flight Functions	1001	D
3.1.1.3.3 In-Flight Work Queues	1035	D
3.1.1.3.3 In-Flight Work Queues	1036	D
3.1.1.3.3 In-Flight Work Queues	1037	D
3.1.1.3.3 In-Flight Work Queues	1038	D
3.1.1.3.3 In-Flight Work Queues	1039	D
3.1.1.3.3 In-Flight Work Queues	1040	D
3.1.1.3.3 In-Flight Work Queues	1041	D
3.1.1.3.3 In-Flight Work Queues	1042	D
3.1.1.3.3 In-Flight Work Queues	1043	D
3.1.1.3.3 In-Flight Work Queues	1044	D
3.1.1.3.3 In-Flight Work Queues	1045	D
3.1.1.3.3 In-Flight Work Queues	1046	D
3.1.1.3.3 In-Flight Work Queues	1047	D
3.1.1.3.3 In-Flight Work Queues	1048	D
3.1.1.3.3 In-Flight Work Queues	1049	D
3.1.1.3.3 In-Flight Work Queues	1050	D
3.1.1.3.3 In-Flight Work Queues	1051	D
3.1.1.3.3 In-Flight Work Queues	1052	D
3.1.1.3.4 Flight Plan Data Transfer	1055	D
3.1.1.3.4 Flight Plan Data Transfer	1056	D
3.1.1.3.7 Contact List	1142	D
3.1.1.3.7 Contact List	1143	D
3.1.1.3.7 Contact List	1144	D
3.1.1.3.7 Contact List	1145	D
3.1.1.3.7 Contact List	1146	D
3.1.1.3.7 Contact List	1147	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.3.7 Contact List	1148	D
3.1.1.3.7 Contact List	1149	D
3.1.1.3.7 Contact List	1150	D
3.1.1.3.7 Contact List	1151	D
3.1.1.3.7 Contact List	1152	D
3.1.1.4 Search and Rescue	--	
3.1.1.4.1 SAR Message Receipt	1153	D
3.1.1.4.1 SAR Message Receipt	1154	D
3.1.1.4.1 SAR Message Receipt	1155	D
3.1.1.4.1 SAR Message Receipt	1156	D
3.1.1.4.1 SAR Message Receipt	1157	D
3.1.1.4.1 SAR Message Receipt	1158	D
3.1.1.4.1 SAR Message Receipt	1159	D
3.1.1.4.1 SAR Message Receipt	1160	D
3.1.1.4.1 SAR Message Receipt	1161	D
3.1.1.4.1 SAR Message Receipt	1162	D
3.1.1.4.1 SAR Message Receipt	1163	D
3.1.1.4.1 SAR Message Receipt	1164	D
3.1.1.4.1 SAR Message Receipt	1165	D
3.1.1.4.1 SAR Message Receipt	1166	D
3.1.1.4.1 SAR Message Receipt	1167	D
3.1.1.4.1 SAR Message Receipt	1168	D
3.1.1.4.1 SAR Message Receipt	1169	D
3.1.1.4.1 SAR Message Receipt	1170	D
3.1.1.4.2 SAR Message Transmission	1171	D
3.1.1.4.2 SAR Message Transmission	1172	D
3.1.1.4.2 SAR Message Transmission	1173	D
3.1.1.4.2 SAR Message Transmission	1174	D
3.1.1.4.2 SAR Message Transmission	1175	D
3.1.1.4.2 SAR Message Transmission	1176	D
3.1.1.4.2 SAR Message Transmission	1177	D
3.1.1.4.2 SAR Message Transmission	1178	D
3.1.1.4.2 SAR Message Transmission	1179	D
3.1.1.4.2 SAR Message Transmission	1180	D

Specification Paragraph		Req. Number	Verification Method
3.1.1.4.2	SAR Message Transmission	1181	D
3.1.1.4.2	SAR Message Transmission	1182	D
3.1.1.4.2	SAR Message Transmission	1183	D
3.1.1.4.2	SAR Message Transmission	1184	D
3.1.1.4.2	SAR Message Transmission	1185	D
3.1.1.4.2	SAR Message Transmission	1186	D
3.1.1.4.2	SAR Message Transmission	1187	D
3.1.1.4.2	SAR Message Transmission	1188	D
3.1.1.4.3	SAR Message List	1189	D
3.1.1.4.3	SAR Message List	1190	D
3.1.1.4.3	SAR Message List	1191	D
3.1.1.4.3	SAR Message List	1192	D
3.1.1.4.3	SAR Message List	1193	D
3.1.1.4.3	SAR Message List	1194	D
3.1.1.4.3	SAR Message List	1195	D
3.1.1.4.3	SAR Message List	1196	D
3.1.1.4.4	SAR Message Cancellation	1197	D
3.1.1.4.4	SAR Message Cancellation	1198	D
3.1.1.4.4	SAR Message Cancellation	1199	D
3.1.1.4.4	SAR Message Cancellation	1200	D
3.1.1.4.4	SAR Message Cancellation	1201	D
3.1.1.4.4	SAR Message Cancellation	1202	D
3.1.1.4.4	SAR Message Cancellation	1203	D
3.1.1.4.4	SAR Message Cancellation	1204	D
3.1.1.4.4	SAR Message Cancellation	1205	D
3.1.1.4.4	SAR Message Cancellation	1206	D
3.1.1.4.4	SAR Message Cancellation	1207	D
3.1.1.4.4	SAR Message Cancellation	1208	D
3.1.1.4.5	SAR Search	1209	D
3.1.1.4.5	SAR Search	1210	D
3.1.1.4.5	SAR Search	1211	D
3.1.1.4.5	SAR Search	1212	D
3.1.1.4.5	SAR Search	1213	D
3.1.1.4.5	SAR Search	1214	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.4.5 SAR Search	1215	D
3.1.1.4.5 SAR Search	1216	D
3.1.1.4.5 SAR Search	1217	D
3.1.1.4.5 SAR Search	1218	D
3.1.1.4.5 SAR Search	1219	D
3.1.1.4.5 SAR Search	1220	D
3.1.1.4.5 SAR Search	1221	D
3.1.1.5 Data Management	1238	D
3.1.1.5 Data Management	1239	D
3.1.1.5.1 Aeronautical Data	1240	D
3.1.1.5.1 Aeronautical Data	1241	D
3.1.1.5.1 Aeronautical Data	1242	D
3.1.1.5.1 Aeronautical Data	1243	D
3.1.1.5.1 Aeronautical Data	1244	D
3.1.1.5.2 Weather Data	1245	D
3.1.1.5.2 Weather Data	1246	D
3.1.1.5.2 Weather Data	1247	D
3.1.1.5.2 Weather Data	1248	D
3.1.1.5.2 Weather Data	1249	D
3.1.1.5.2 Weather Data	1250	D
3.1.1.5.3 Static Data	1251	D
3.1.1.5.3 Static Data	1252	D
3.1.1.5.3 Static Data	1253	D
3.1.1.5.4 Pre-Stored Flight Plan Database	1254	D
3.1.1.5.4 Pre-Stored Flight Plan Database	1255	D
3.1.1.5.5 Alert Queues	--	
3.1.1.5.5.1 SVCB Message List	1256	D
3.1.1.5.5.1 SVCB Message List	1257	D
3.1.1.5.5.1 SVCB Message List	1258	D
3.1.1.5.5.1 SVCB Message List	1259	D
3.1.1.5.5.1 SVCB Message List	1260	D
3.1.1.5.5.1 SVCB Message List	1261	D
3.1.1.5.5.1 SVCB Message List	1262	D
3.1.1.5.5.1 SVCB Message List	1263	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.5.1 SVCB Message List	1264	D
3.1.1.5.5.1 SVCB Message List	1265	D
3.1.1.5.5.1 SVCB Message List	1266	D
3.1.1.5.5.2 SVCA Message List	1267	D
3.1.1.5.5.2 SVCA Message List	1268	D
3.1.1.5.5.2 SVCA Message List	1269	D
3.1.1.5.5.2 SVCA Message List	1270	D
3.1.1.5.5.2 SVCA Message List	1271	D
3.1.1.5.5.2 SVCA Message List	1272	D
3.1.1.5.5.2 SVCA Message List	1273	D
3.1.1.5.5.2 SVCA Message List	1274	D
3.1.1.5.5.2 SVCA Message List	1275	D
3.1.1.5.5.2 SVCA Message List	1276	D
3.1.1.5.5.2 SVCA Message List	1277	D
3.1.1.5.6 WMO Header Database	1278	D
3.1.1.5.6 WMO Header Database	1279	D
3.1.1.5.6 WMO Header Database	1280	D
3.1.1.5.6 WMO Header Database	1281	D
3.1.1.5.6 WMO Header Database	1282	D
3.1.1.5.7 Flight Plan Database	1283	D
3.1.1.5.7 Flight Plan Database	1284	D
3.1.1.5.7 Flight Plan Database	1285	D
3.1.1.5.7 Flight Plan Database	1286	D
3.1.1.5.7 Flight Plan Database	1287	D
3.1.1.5.7 Flight Plan Database	1288	D
3.1.1.5.7 Flight Plan Database	1289	D
3.1.1.5.7 Flight Plan Database	1290	D
3.1.1.5.7 Flight Plan Database	1291	D
3.1.1.5.7 Flight Plan Database	1292	D
3.1.1.5.7 Flight Plan Database	1293	D
3.1.1.5.7 Flight Plan Database	1294	D
3.1.1.5.7 Flight Plan Database	1295	D
3.1.1.5.8 Flight Related Updates	1296	D
3.1.1.5.8 Flight Related Updates	1297	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.8 Flight Related Updates	1298	D
3.1.1.5.8 Flight Related Updates	1299	D
3.1.1.5.9 Law Enforcement (LE) Database	1302	D
3.1.1.5.9 Law Enforcement (LE) Database	1303	D
3.1.1.5.9 Law Enforcement (LE) Database	1304	D
3.1.1.5.9 Law Enforcement (LE) Database	1305	D
3.1.1.5.10 NOTAM Database	1306	D
3.1.1.5.11 Internal Messaging	1307	D
3.1.1.5.11 Internal Messaging	1308	D
3.1.1.5.11 Internal Messaging	1309	D
3.1.1.5.11 Internal Messaging	1310	D
3.1.1.5.11 Internal Messaging	1311	D
3.1.1.5.11 Internal Messaging	1312	D
3.1.1.5.11 Internal Messaging	1313	D
3.1.1.5.12 Email	1314	D
3.1.1.5.13 Master Contact Database	1315	D
3.1.1.5.13 Master Contact Database	1316	D
3.1.1.5.13 Master Contact Database	1317	D
3.1.1.5.13 Master Contact Database	1318	D
3.1.1.5.13 Master Contact Database	1319	D
3.1.1.5.13 Master Contact Database	1320	D
3.1.1.5.13 Master Contact Database	1321	D
3.1.1.5.13 Master Contact Database	1322	D
3.1.1.5.13 Master Contact Database	1323	D
3.1.1.5.13 Master Contact Database	1324	D
3.1.1.5.13 Master Contact Database	1325	D
3.1.1.5.13 Master Contact Database	1326	D
3.1.1.5.13 Master Contact Database	1327	D
3.1.1.5.13 Master Contact Database	1328	D
3.1.1.5.13 Master Contact Database	1329	D
3.1.1.5.13 Master Contact Database	1330	D
3.1.1.5.13 Master Contact Database	1331	D
3.1.1.5.13 Master Contact Database	1332	D
3.1.1.5.13 Master Contact Database	1333	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.13 Master Contact Database	1334	D
3.1.1.5.13 Master Contact Database	1335	D
3.1.1.5.13 Master Contact Database	1336	D
3.1.1.5.13 Master Contact Database	1337	D
3.1.1.5.13 Master Contact Database	1338	D
3.1.1.5.13 Master Contact Database	1339	D
3.1.1.5.13 Master Contact Database	1340	D
3.1.1.5.13 Master Contact Database	1341	D
3.1.1.5.13 Master Contact Database	1342	D
3.1.1.5.14 Integrated Facsimile Server	1343	D
3.1.1.5.14 Integrated Facsimile Server	1344	D
3.1.1.5.14 Integrated Facsimile Server	1345	D
3.1.1.5.14 Integrated Facsimile Server	1346	D
3.1.1.5.14 Integrated Facsimile Server	1347	D
3.1.1.5.14 Integrated Facsimile Server	1348	D
3.1.1.5.14 Integrated Facsimile Server	1349	D
3.1.1.5.15 Integrated Scanner	1350	D
3.1.1.5.15 Integrated Scanner	1351	D
3.1.1.5.15 Integrated Scanner	1352	D
3.1.1.5.15 Integrated Scanner	1353	D
3.1.1.5.15 Integrated Scanner	1354	D
3.1.1.5.15 Integrated Scanner	1355	D
3.1.1.5.15 Integrated Scanner	1356	D
3.1.1.5.15 Integrated Scanner	1357	D
3.1.1.5.16 Integrated Printer	1358	D
3.1.1.5.16 Integrated Printer	1359	D
3.1.1.5.16.1 Monochromatic Laser Printer	1360	D
3.1.1.5.16.1 Monochromatic Laser Printer	1361	D
3.1.1.5.16.1 Monochromatic Laser Printer	1362	D
3.1.1.5.16.1 Monochromatic Laser Printer	1363	D
3.1.1.5.16.1 Monochromatic Laser Printer	1364	D
3.1.1.5.16.1 Monochromatic Laser Printer	1365	D
3.1.1.5.16.1 Monochromatic Laser Printer	1366	D
3.1.1.5.16.1 Monochromatic Laser Printer	1367	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.16.2 Color Printer	2976	D
3.1.1.5.16.2 Color Printer	1368	D
3.1.1.5.16.2 Color Printer	1369	D
3.1.1.5.16.2 Color Printer	1370	D
3.1.1.5.16.2 Color Printer	1371	D
3.1.1.5.16.2 Color Printer	1372	D
3.1.1.5.16.2 Color Printer	1373	D
3.1.1.5.16.2 Color Printer	1374	D
3.1.1.5.16.2 Color Printer	1375	D
3.1.1.5.16.2 Color Printer	1376	D
3.1.1.5.16.2 Color Printer	1377	D
3.1.1.5.16.2 Color Printer	1378	D
3.1.1.5.17 Secondary Storage Device	1379	D
3.1.1.5.18 Standard COTS Application Software	1380	D
3.1.1.5.18 Standard COTS Application Software	1381	D
3.1.1.5.18 Standard COTS Application Software	1382	D
3.1.1.5.19 General Message Database	1383	D
3.1.1.5.19 General Message Database	1384	D
3.1.1.5.19 General Message Database	1385	D
3.1.1.5.19 General Message Database	1386	D
3.1.1.5.19 General Message Database	1387	D
3.1.1.5.19 General Message Database	1388	D
3.1.1.5.19 General Message Database	1389	D
3.1.1.5.20 Master Flight Plan Database	1390	D
3.1.1.5.20 Master Flight Plan Database	1391	D
3.1.1.5.20 Master Flight Plan Database	1392	D
3.1.1.5.20 Master Flight Plan Database	1393	D
3.1.1.5.20 Master Flight Plan Database	1394	D
3.1.1.5.20 Master Flight Plan Database	1395	D
3.1.1.5.20 Master Flight Plan Database	1396	D
3.1.1.5.20 Master Flight Plan Database	1397	D
3.1.1.5.20 Master Flight Plan Database	1398	D
3.1.1.5.20 Master Flight Plan Database	1399	D
3.1.1.5.20 Master Flight Plan Database	1400	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.20 Master Flight Plan Database	1401	D
3.1.1.5.20 Master Flight Plan Database	1402	D
3.1.1.5.20 Master Flight Plan Database	1403	D
3.1.1.5.20 Master Flight Plan Database	1404	D
3.1.1.5.20 Master Flight Plan Database	1405	D
3.1.1.5.20 Master Flight Plan Database	1406	D
3.1.1.5.20 Master Flight Plan Database	1407	D
3.1.1.5.20 Master Flight Plan Database	1408	D
3.1.1.5.20 Master Flight Plan Database	1409	D
3.1.1.5.20 Master Flight Plan Database	1410	D
3.1.1.5.20 Master Flight Plan Database	1411	D
3.1.1.5.20 Master Flight Plan Database	1412	D
3.1.1.5.20 Master Flight Plan Database	1413	D
3.1.1.5.20 Master Flight Plan Database	1414	D
3.1.1.5.20 Master Flight Plan Database	1415	D
3.1.1.5.20 Master Flight Plan Database	1416	D
3.1.1.5.20 Master Flight Plan Database	1417	D
3.1.1.5.20 Master Flight Plan Database	1418	D
3.1.1.5.20 Master Flight Plan Database	1419	D
3.1.1.5.20 Master Flight Plan Database	1420	D
3.1.1.5.20 Master Flight Plan Database	1421	D
3.1.1.5.20 Master Flight Plan Database	1422	D
3.1.1.5.20 Master Flight Plan Database	1423	D
3.1.1.5.20 Master Flight Plan Database	1424	D
3.1.1.5.20 Master Flight Plan Database	1425	D
3.1.1.5.20 Master Flight Plan Database	1426	D
3.1.1.5.20 Master Flight Plan Database	1427	D
3.1.1.5.20 Master Flight Plan Database	1428	D
3.1.1.5.20 Master Flight Plan Database	1429	D
3.1.1.5.20 Master Flight Plan Database	1430	D
3.1.1.5.20 Master Flight Plan Database	1431	D
3.1.1.5.20 Master Flight Plan Database	1432	D
3.1.1.5.20 Master Flight Plan Database	1433	D
3.1.1.5.20 Master Flight Plan Database	1434	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.20 Master Flight Plan Database	1435	D
3.1.1.5.20 Master Flight Plan Database	1436	D
3.1.1.5.20 Master Flight Plan Database	1437	D
3.1.1.5.20 Master Flight Plan Database	1438	D
3.1.1.5.20 Master Flight Plan Database	1439	D
3.1.1.5.20 Master Flight Plan Database	1440	D
3.1.1.5.20 Master Flight Plan Database	1441	D
3.1.1.5.21 Inflight Contact Database	1442	D
3.1.1.5.21 Inflight Contact Database	1443	D
3.1.1.5.21 Inflight Contact Database	1444	D
3.1.1.5.21 Inflight Contact Database	1445	D
3.1.1.5.21 Inflight Contact Database	1446	D
3.1.1.5.21 Inflight Contact Database	1447	D
3.1.1.5.22 Traffic Count Database	1448	D
3.1.1.5.22 Traffic Count Database	1449	D
3.1.1.5.22 Traffic Count Database	1450	D
3.1.1.5.22 Traffic Count Database	1451	D
3.1.1.5.22 Traffic Count Database	1452	D
3.1.1.5.23 Comment Database	1453	D
3.1.1.5.24 Operational Performance Metric Database	1454	D
3.1.1.5.25 View Sequence Database	1455	D
3.1.1.5.25 View Sequence Database	1456	D
3.1.1.5.25 View Sequence Database	1457	D
3.1.1.5.25 View Sequence Database	1458	D
3.1.1.5.25 View Sequence Database	1459	D
3.1.1.5.25 View Sequence Database	1460	D
3.1.1.5.25 View Sequence Database	1461	D
3.1.1.5.25 View Sequence Database	1462	D
3.1.1.5.25 View Sequence Database	1463	D
3.1.1.5.25 View Sequence Database	1464	D
3.1.1.5.25 View Sequence Database	1465	D
3.1.1.5.25 View Sequence Database	1466	D
3.1.1.5.25 View Sequence Database	1467	D
3.1.1.5.25 View Sequence Database	1468	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.25 View Sequence Database	1469	D
3.1.1.5.25 View Sequence Database	1470	D
3.1.1.5.25 View Sequence Database	1471	D
3.1.1.5.25 View Sequence Database	1472	D
3.1.1.5.25 View Sequence Database	1473	D
3.1.1.5.25 View Sequence Database	1474	D
3.1.1.5.25 View Sequence Database	1475	D
3.1.1.5.25 View Sequence Database	1476	D
3.1.1.5.25 View Sequence Database	1477	D
3.1.1.5.28 Alerts for Delayed Products	3062	D
3.1.1.5.28 Alerts for Delayed Products	1503	D
3.1.1.5.28 Alerts for Delayed Products	1504	D
3.1.1.5.28 Alerts for Delayed Products	1505	D
3.1.1.5.28 Alerts for Delayed Products	1506	D
3.1.1.5.28 Alerts for Delayed Products	1507	D
3.1.1.5.28 Alerts for Delayed Products	1508	D
3.1.1.5.29 Message Transmission Queues	1509	D
3.1.1.5.29 Message Transmission Queues	1510	D
3.1.1.5.29 Message Transmission Queues	1511	D
3.1.1.5.30 Real-time System Updates	1512	D
3.1.1.5.30 Real-time System Updates	1513	D
3.1.1.5.631 Configurable Parameters	--	
3.1.1.5.31.1 System Parameters	1514	D
3.1.1.5.31.1 System Parameters	1515	D
3.1.1.5.31.1 System Parameters	1516	D
3.1.1.5.31.1 System Parameters	1517	D
3.1.1.5.31.1 System Parameters	1518	D
3.1.1.5.31.1 System Parameters	1519	D
3.1.1.5.31.1 System Parameters	1520	D
3.1.1.5.31.1 System Parameters	1521	D
3.1.1.5.31.1 System Parameters	1522	D
3.1.1.5.31.1 System Parameters	1523	D
3.1.1.5.31.1 System Parameters	1524	D
3.1.1.5.31.1 System Parameters	1525	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.31.1 System Parameters	1526	D
3.1.1.5.31.1 System Parameters	1527	D
3.1.1.5.31.1 System Parameters	1528	D
3.1.1.5.31.1 System Parameters	1529	D
3.1.1.5.31.1 System Parameters	1530	D
3.1.1.5.31.1 System Parameters	1531	D
3.1.1.5.31.1 System Parameters	1532	D
3.1.1.5.31.1 System Parameters	1533	D
3.1.1.5.31.1 System Parameters	1534	D
3.1.1.5.31.1 System Parameters	1535	D
3.1.1.5.31.1 System Parameters	1536	D
3.1.1.5.31.1 System Parameters	1537	D
3.1.1.5.31.2 Facility Parameters	1538	D
3.1.1.5.31.2 Facility Parameters	1539	D
3.1.1.5.31.2 Facility Parameters	1540	D
3.1.1.5.31.2 Facility Parameters	1541	D
3.1.1.5.31.2 Facility Parameters	1542	D
3.1.1.5.31.2 Facility Parameters	1543	D
3.1.1.5.31.2 Facility Parameters	1544	D
3.1.1.5.31.3 User Parameters	1545	D
3.1.1.5.31.3 User Parameters	1546	D
3.1.1.5.31.3 User Parameters	1547	D
3.1.1.5.31.3 User Parameters	1548	D
3.1.1.5.31.3 User Parameters	1549	D
3.1.1.5.31.3 User Parameters	1550	D
3.1.1.5.31.3 User Parameters	1551	D
3.1.1.5.31.3 User Parameters	1552	D
3.1.1.5.31.3 User Parameters	1553	D
3.1.1.5.31.3 User Parameters	1554	D
3.1.1.5.31.3 User Parameters	1555	D
3.1.1.5.32 Online Help	1556	D
3.1.1.5.32 Online Help	1557	D
3.1.1.5.32 Online Help	1558	D
3.1.1.5.32 Online Help	1559	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.32 Online Help	1560	D
3.1.1.5.32 Online Help	1561	D
3.1.1.5.32 Online Help	1562	D
3.1.1.5.32 Online Help	1563	D
3.1.1.5.32 Online Help	1564	D
3.1.1.5.32 Online Help	1565	D
3.1.1.5.32 Online Help	1566	D
3.1.1.5.32 Online Help	1567	D
3.1.1.5.32 Online Help	1568	D
3.1.1.5.32 Online Help	1569	D
3.1.1.5.32 Online Help	1570	D
3.1.1.5.32 Online Help	1571	D
3.1.1.5.32 Online Help	1572	D
3.1.1.6 Weather Observation Processing	--	
3.1.1.6.1 Weather Observations Processing	1573	D
3.1.1.6.1 Weather Observations Processing	1574	D
3.1.1.6.1 Weather Observations Processing	1575	D
3.1.1.6.1 Weather Observations Processing	1576	D
3.1.1.6.1 Weather Observations Processing	1577	D
3.1.1.6.1 Weather Observations Processing	1578	D
3.1.1.6.1 Weather Observations Processing	1579	D
3.1.1.6.1 Weather Observations Processing	1580	D
3.1.1.6.1 Weather Observations Processing	1581	D
3.1.1.6.1 Weather Observations Processing	1582	D
3.1.1.6.1 Weather Observations Processing	1583	D
3.1.1.6.1 Weather Observations Processing	1584	D
3.1.1.6.1 Weather Observations Processing	1585	D
3.1.1.6.1 Weather Observations Processing	1586	D
3.1.1.6.1 Weather Observations Processing	1587	D
3.1.1.6.1 Weather Observations Processing	1588	D
3.1.1.6.1 Weather Observations Processing	1589	D
3.1.1.6.1 Weather Observations Processing	1590	D
3.1.1.6.1 Weather Observations Processing	1591	D
3.1.1.6.1 Weather Observations Processing	1592	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.6.1 Weather Observations Processing	1593	D
3.1.1.6.1 Weather Observations Processing	1594	D
3.1.1.6.1 Weather Observations Processing	1595	D
3.1.1.6.1 Weather Observations Processing	1596	D
3.1.1.6.1 Weather Observations Processing	1597	D
3.1.1.6.1 Weather Observations Processing	1598	D
3.1.1.6.1 Weather Observations Processing	1599	D
3.1.1.6.1 Weather Observations Processing	1600	D
3.1.1.6.2 Pilot Reports Processing	1601	D
3.1.1.6.2 Pilot Reports Processing	1602	D
3.1.1.6.2 Pilot Reports Processing	1603	D
3.1.1.6.2 Pilot Reports Processing	1604	D
3.1.1.6.2 Pilot Reports Processing	1605	D
3.1.1.6.2 Pilot Reports Processing	1606	D
3.1.1.6.2 Pilot Reports Processing	1607	D
3.1.1.6.2 Pilot Reports Processing	1608	D
3.1.1.6.2 Pilot Reports Processing	1609	D
3.1.1.6.2 Pilot Reports Processing	1610	D
3.1.1.6.2 Pilot Reports Processing	1611	D
3.1.1.6.2 Pilot Reports Processing	1612	D
3.1.1.6.2 Pilot Reports Processing	1613	D
3.1.1.6.2 Pilot Reports Processing	1614	D
3.1.1.6.2 Pilot Reports Processing	1615	D
3.1.1.6.2 Pilot Reports Processing	1616	D
3.1.1.6.2 Pilot Reports Processing	1617	D
3.1.1.6.2 Pilot Reports Processing	1618	D
3.1.1.6.2 Pilot Reports Processing	1619	D
3.1.1.6.2 Pilot Reports Processing	1620	D
3.1.1.6.2 Pilot Reports Processing	1621	D
3.1.1.6.2 Pilot Reports Processing	1622	D
3.1.1.6.2 Pilot Reports Processing	1623	D
3.1.1.6.2 Pilot Reports Processing	1624	D
3.1.1.6.2 Pilot Reports Processing	1625	D
3.1.1.6.2 Pilot Reports Processing	1626	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.6.2 Pilot Reports Processing	1627	D
3.1.1.7 NOTAM Processing	--	
3.1.1.7.1 NOTAM Transmit Processing	1628	D
3.1.1.7.1 NOTAM Transmit Processing	1629	D
3.1.1.7.1 NOTAM Transmit Processing	1630	D
3.1.1.7.1 NOTAM Transmit Processing	1631	D
3.1.1.7.1 NOTAM Transmit Processing	1632	D
3.1.1.7.1 NOTAM Transmit Processing	1633	D
3.1.1.7.1 NOTAM Transmit Processing	1634	D
3.1.1.7.1 NOTAM Transmit Processing	1635	D
3.1.1.7.1 NOTAM Transmit Processing	1636	D
3.1.1.7.1 NOTAM Transmit Processing	1637	D
3.1.1.7.1 NOTAM Transmit Processing	1638	D
3.1.1.7.1 NOTAM Transmit Processing	1639	D
3.1.1.7.1 NOTAM Transmit Processing	1640	D
3.1.1.7.1 NOTAM Transmit Processing	1641	D
3.1.1.7.1 NOTAM Transmit Processing	1642	D
3.1.1.7.1 NOTAM Transmit Processing	1643	D
3.1.1.7.1 NOTAM Transmit Processing	1644	D
3.1.1.7.1 NOTAM Transmit Processing	1645	D
3.1.1.7.1 NOTAM Transmit Processing	1646	D
3.1.1.7.1 NOTAM Transmit Processing	1647	D
3.1.1.7.2 NOTAM Log	1648	D
3.1.1.7.2 NOTAM Log	1649	D
3.1.1.7.2 NOTAM Log	1650	D
3.1.1.7.2 NOTAM Log	1651	D
3.1.1.7.2 NOTAM Log	1652	D
3.1.1.7.2 NOTAM Log	1653	D
3.1.1.7.2 NOTAM Log	1654	D
3.1.1.7.2 NOTAM Log	1655	D
3.1.1.7.2 NOTAM Log	1656	D
3.1.1.7.2 NOTAM Log	1657	D
3.1.1.7.2 NOTAM Log	1658	D
3.1.1.7.2 NOTAM Log	1659	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.7.2 NOTAM Log	1660	D
3.1.1.7.2 NOTAM Log	2977	D
3.1.1.7.2 NOTAM Log	2978	D
3.1.1.7.2 NOTAM Log	2979	D
3.1.1.7.2 NOTAM Log	2980	D
3.1.1.7.2 NOTAM Log	2981	D
3.1.1.7.2 NOTAM Log	2982	D
3.1.1.7.2 NOTAM Log	2983	D
3.1.1.7.2 NOTAM Log	2984	D
3.1.1.7.2 NOTAM Log	2985	D
3.1.1.7.2 NOTAM Log	2986	D
3.1.1.7.2 NOTAM Log	2987	D
3.1.1.7.2 NOTAM Log	2988	D
3.1.1.7.2 NOTAM Log	1661	D
3.1.1.7.2 NOTAM Log	1662	D
3.1.1.7.2 NOTAM Log	1663	D
3.1.1.7.2 NOTAM Log	1664	D
3.1.1.7.2 NOTAM Log	1665	D
3.1.1.7.2 NOTAM Log	1666	D
3.1.1.7.2 NOTAM Log	1667	D
3.1.1.7.2 NOTAM Log	1668	D
3.1.1.7.2 NOTAM Log	1669	D
3.1.1.7.2 NOTAM Log	1670	D
3.1.1.7.2 NOTAM Log	1671	D
3.1.1.7.2 NOTAM Log	1672	D
3.1.1.7.2 NOTAM Log	1673	D
3.1.1.7.2 NOTAM Log	1674	D
3.1.1.7.3 NOTAM Coordination Activity	1675	D
3.1.1.7.3 NOTAM Coordination Activity	1676	D
3.1.1.7.3 NOTAM Coordination Activity	1677	D
3.1.1.7.3 NOTAM Coordination Activity	1678	D
3.1.1.7.3 NOTAM Coordination Activity	1679	D
3.1.1.7.3 NOTAM Coordination Activity	1680	D
3.1.1.7.3 NOTAM Coordination Activity	1681	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.7.3 NOTAM Coordination Activity	1682	D
3.1.1.7.3 NOTAM Coordination Activity	1683	D
3.1.1.7.3 NOTAM Coordination Activity	1684	D
3.1.1.7.3 NOTAM Coordination Activity	1685	D
3.1.1.7.3 NOTAM Coordination Activity	1686	D
3.1.1.7.3 NOTAM Coordination Activity	1687	D
3.1.1.7.3 NOTAM Coordination Activity	1688	D
3.1.1.7.3 NOTAM Coordination Activity	1689	D
3.1.1.7.3 NOTAM Coordination Activity	1690	D
3.1.1.7.3 NOTAM Coordination Activity	1691	D
3.1.1.7.3 NOTAM Coordination Activity	1692	D
3.1.1.7.3 NOTAM Coordination Activity	1693	D
3.1.1.7.3 NOTAM Coordination Activity	1694	D
3.1.1.7.3 NOTAM Coordination Activity	1695	D
3.1.1.7.3 NOTAM Coordination Activity	1696	D
3.1.1.7.3 NOTAM Coordination Activity	1697	D
3.1.1.7.3 NOTAM Coordination Activity	1698	D
3.1.1.7.3 NOTAM Coordination Activity	1699	D
3.1.1.7.4 NOTAM Templates	1700	D
3.1.1.7.4 NOTAM Templates	1701	D
3.1.1.7.4 NOTAM Templates	1702	D
3.1.1.7.4 NOTAM Templates	1703	D
3.1.1.7.4 NOTAM Templates	1704	D
3.1.1.7.4 NOTAM Templates	1705	D
3.1.1.7.4 NOTAM Templates	1706	D
3.1.1.7.4 NOTAM Templates	1707	D
3.1.1.7.4 NOTAM Templates	1708	D
3.1.1.8 Training Support Processing	--	
3.1.1.8.1 Configuration Training Mode	1709	D
3.1.1.8.1 Configuration Training Mode	1710	D
3.1.1.8.2 Scenarios	1711	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.8.2 Scenarios	1712	D
3.1.1.8.2 Scenarios	1713	D
3.1.1.8.2 Scenarios	1714	D
3.1.1.8.2 Scenarios	1715	D
3.1.1.8.2 Scenarios	1716	D
3.1.1.8.2 Scenarios	1717	D
3.1.1.8.2 Scenarios	1718	D
3.1.1.8.2 Scenarios	1719	D
3.1.1.8.2 Scenarios	1720	D
3.1.1.8.2 Scenarios	1721	D
3.1.1.8.2 Scenarios	1722	D
3.1.1.8.2 Scenarios	1723	D
3.1.1.8.2 Scenarios	1724	D
3.1.1.8.2 Scenarios	1725	D
3.1.1.8.3 Operational Training Mode	1726	D
3.1.1.8.3 Operational Training Mode	1727	D
3.1.1.8.3 Operational Training Mode	1728	D
3.1.1.8.3 Operational Training Mode	1729	D
3.1.1.8.3 Operational Training Mode	1730	D
3.1.1.8.3 Operational Training Mode	1731	D
3.1.1.8.3 Operational Training Mode	1732	D
3.1.1.8.4 Scenario Replay	1733	D
3.1.1.8.4 Scenario Replay	1734	D
3.1.1.8.4 Scenario Replay	1735	D
3.1.1.8.4 Scenario Replay	1736	D
3.1.1.8.4 Scenario Replay	1737	D
3.1.1.8.4 Scenario Replay	1738	D
3.1.1.8.4 Scenario Replay	1739	D
3.1.1.8.4 Scenario Replay	1740	D
3.1.1.8.4 Scenario Replay	1741	D
3.1.1.8.4 Scenario Replay	1742	D
3.1.1.8.5 Import of Weather Data	1743	D
3.1.1.8.5 Import of Weather Data	1744	D
3.1.1.8.5 Import of Weather Data	1745	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.8.6 Export of Weather Data	1746	D
3.1.1.8.6 Export of Weather Data	1747	D
3.1.1.8.6 Export of Weather Data	1748	D
3.1.1.8.7 Online Testing	1749	D
3.1.1.8.7 Online Testing	1750	D
3.1.1.8.7 Online Testing	1751	D
3.1.1.8.7 Online Testing	1752	D
3.1.1.8.7 Online Testing	1753	D
3.1.1.8.7 Online Testing	1754	D
3.1.1.8.7 Online Testing	1755	D
3.1.1.8.7 Online Testing	1756	D
3.1.1.9 Supervisory / Administrative Processing	--	
3.1.1.9.1 Tally Reports	1757	D
3.1.1.9.1 Tally Reports	1758	D
3.1.1.9.1 Tally Reports	1759	D
3.1.1.9.1 Tally Reports	1760	D
3.1.1.9.1 Tally Reports	1761	D
3.1.1.9.1 Tally Reports	1762	D
3.1.1.9.1 Tally Reports	1763	D
3.1.1.9.1 Tally Reports	1764	D
3.1.1.9.1 Tally Reports	1765	D
3.1.1.9.1 Tally Reports	1766	D
3.1.1.9.1 Tally Reports	1767	D
3.1.1.9.1 Tally Reports	1768	D
3.1.1.9.1 Tally Reports	1769	D
3.1.1.9.1 Tally Reports	1770	D
3.1.1.9.1 Tally Reports	1771	D
3.1.1.9.1 Tally Reports	1772	D
3.1.1.9.1.1 Traffic Count	1773	D
3.1.1.9.1.1 Traffic Count	1774	D
3.1.1.9.1.1 Traffic Count	1775	D
3.1.1.9.1.1 Traffic Count	1776	D
3.1.1.9.1.1 Traffic Count	1777	D
3.1.1.9.1.1 Traffic Count	1778	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.9.1.1 Traffic Count	1779	D
3.1.1.9.1.1 Traffic Count	1780	D
3.1.1.9.1.1 Traffic Count	1781	D
3.1.1.9.1.1 Traffic Count	1782	D
3.1.1.9.1.1 Traffic Count	1784	D
3.1.1.9.1.1 Traffic Count	1785	D
3.1.1.9.1.1 Traffic Count	1786	D
3.1.1.9.1.1 Traffic Count	1787	D
3.1.1.9.1.1 Traffic Count	1788	D
3.1.1.9.1.1 Traffic Count	1790	D
3.1.1.9.1.1 Traffic Count	1791	D
3.1.1.9.1.1 Traffic Count	1792	D
3.1.1.9.1.1 Traffic Count	1793	D
3.1.1.9.1.1 Traffic Count	1794	D
3.1.1.9.1.1 Traffic Count	1796	D
3.1.1.9.1.1 Traffic Count	1809	D
3.1.1.9.1.1 Traffic Count	1810	D
3.1.1.9.1.1 Traffic Count	1811	D
3.1.1.9.1.1 Traffic Count	1812	D
3.1.1.9.1.1 Traffic Count	1813	D
3.1.1.9.1.1 Traffic Count	1814	D
3.1.1.9.1.1 Traffic Count	1815	D
3.1.1.9.1.1 Traffic Count	1816	D
3.1.1.9.1.1 Traffic Count	1817	D
3.1.1.9.1.1 Traffic Count	1818	D
3.1.1.9.1.1 Traffic Count	1819	D
3.1.1.9.1.1 Traffic Count	1820	D
3.1.1.9.1.1 Traffic Count	1821	D
3.1.1.9.1.1 Traffic Count	1822	D
3.1.1.9.1.1 Traffic Count	1823	D
3.1.1.9.1.1 Traffic Count	1824	D
3.1.1.9.1.1 Traffic Count	1825	D
3.1.1.9.1.1 Traffic Count	1826	D
3.1.1.9.1.1 Traffic Count	1827	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.9.1.1 Traffic Count	1828	D
3.1.1.9.1.1 Traffic Count	1829	D
3.1.1.9.1.1 Traffic Count	1830	D
3.1.1.9.1.1 Traffic Count	1831	D
3.1.1.9.1.1 Traffic Count	1832	D
3.1.1.9.1.1 Traffic Count	1833	D
3.1.1.9.1.1 Traffic Count	1834	D
3.1.1.9.1.1 Traffic Count	1835	D
3.1.1.9.1.1 Traffic Count	1836	D
3.1.1.9.1.1 Traffic Count	1837	D
3.1.1.9.1.1 Traffic Count	1838	D
3.1.1.9.1.1 Traffic Count	1839	D
3.1.1.9.1.1 Traffic Count	1840	D
3.1.1.9.1.1 Traffic Count	1841	D
3.1.1.9.1.1 Traffic Count	1842	D
3.1.1.9.1.1 Traffic Count	1843	D
3.1.1.9.1.1 Traffic Count	1844	D
3.1.1.9.1.1 Traffic Count	1845	D
3.1.1.9.1.1 Traffic Count	1846	D
3.1.1.9.1.1 Traffic Count	1847	D
3.1.1.9.1.1 Traffic Count	1848	D
3.1.1.9.1.1 Traffic Count	1849	D
3.1.1.9.1.1 Traffic Count	1850	D
3.1.1.9.1.1 Traffic Count	1851	D
3.1.1.9.1.1 Traffic Count	1852	D
3.1.1.9.1.1 Traffic Count	1853	D
3.1.1.9.1.1 Traffic Count	1854	D
3.1.1.9.1.1 Traffic Count	1855	D
3.1.1.9.1.1 Traffic Count	1856	D
3.1.1.9.1.1 Traffic Count	1857	D
3.1.1.9.1.1 Traffic Count	1858	D
3.1.1.9.1.1 Traffic Count	1859	D
3.1.1.9.1.1 Traffic Count	1860	D
3.1.1.9.1.1 Traffic Count	1861	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.9.1.1 Traffic Count	1862	D
3.1.1.9.1.1 Traffic Count	1863	D
3.1.1.9.1.1 Traffic Count	1864	D
3.1.1.9.1.1 Traffic Count	1865	D
3.1.1.9.1.1 Traffic Count	1866	D
3.1.1.9.1.1 Traffic Count	1867	D
3.1.1.9.1.1 Traffic Count	1868	D
3.1.1.9.1.1 Traffic Count	1869	D
3.1.1.9.1.1 Traffic Count	1870	D
3.1.1.9.1.1 Traffic Count	1871	D
3.1.1.9.1.1 Traffic Count	1872	D
3.1.1.9.1.1 Traffic Count	1873	D
3.1.1.9.1.1 Traffic Count	1874	D
3.1.1.9.1.1 Traffic Count	1875	D
3.1.1.9.1.1 Traffic Count	1876	D
3.1.1.9.1.1 Traffic Count	1877	D
3.1.1.9.1.1 Traffic Count	1878	D
3.1.1.9.1.1 Traffic Count	1879	D
3.1.1.9.1.1 Traffic Count	1880	D
3.1.1.9.1.1 Traffic Count	1881	D
3.1.1.9.1.1 Traffic Count	1882	D
3.1.1.9.1.1 Traffic Count	1883	D
3.1.1.9.1.1 Traffic Count	1884	D
3.1.1.9.1.1 Traffic Count	1945	D
3.1.1.9.1.1 Traffic Count	1946	D
3.1.1.9.1.1 Traffic Count	1947	D
3.1.1.9.1.1 Traffic Count	1948	D
3.1.1.9.1.1 Traffic Count	1949	D
3.1.1.9.1.1 Traffic Count	1950	D
3.1.1.9.1.1 Traffic Count	1951	D
3.1.1.9.1.1 Traffic Count	1952	D
3.1.1.9.1.1 Traffic Count	1953	D
3.1.1.9.1.1 Traffic Count	1954	D
3.1.1.9.1.1 Traffic Count	1955	D

Specification Paragraph		Req. Number	Verification Method
3.1.1.9.1.1	Traffic Count	1956	D
3.1.1.9.1.1	Traffic Count	1957	D
3.1.1.9.1.1	Traffic Count	1958	D
3.1.1.9.1.1	Traffic Count	1959	D
3.1.1.9.1.1	Traffic Count	1960	D
3.1.1.9.1.1	Traffic Count	1961	D
3.1.1.9.1.1	Traffic Count	1962	D
3.1.1.9.1.1	Traffic Count	1963	D
3.1.1.9.1.1	Traffic Count	1964	D
3.1.1.9.1.1	Traffic Count	1965	D
3.1.1.9.1.1	Traffic Count	1966	D
3.1.1.9.1.1	Traffic Count	1967	D
3.1.1.9.1.1	Traffic Count	1968	D
3.1.1.9.1.1	Traffic Count	1969	D
3.1.1.9.1.1	Traffic Count	1970	D
3.1.1.9.1.1	Traffic Count	1971	D
3.1.1.9.1.1	Traffic Count	1972	D
3.1.1.9.1.1	Traffic Count	1973	D
3.1.1.9.1.1	Traffic Count	1974	D
3.1.1.9.1.2	Position Log	1975	D
3.1.1.9.1.2	Position Log	1976	D
3.1.1.9.1.2	Position Log	1977	D
3.1.1.9.1.2	Position Log	1978	D
3.1.1.9.1.2	Position Log	1979	D
3.1.1.9.1.2	Position Log	1980	D
3.1.1.9.1.2	Position Log	1981	D
3.1.1.9.1.2	Position Log	1982	D
3.1.1.9.1.3	Operational Performance Metrics	1983	D
3.1.1.9.1.3	Operational Performance Metrics	1984	D
3.1.1.9.1.3	Operational Performance Metrics	1985	D
3.1.1.9.1.3	Operational Performance Metrics	1986	D
3.1.1.9.1.3	Operational Performance Metrics	1987	D
3.1.1.9.1.3	Operational Performance Metrics	1988	D
3.1.1.9.1.3	Operational Performance Metrics	1989	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.9.1.3 Operational Performance Metrics	1990	D
3.1.1.9.1.3 Operational Performance Metrics	1991	D
3.1.1.9.1.3 Operational Performance Metrics	1992	D
3.1.1.9.1.3 Operational Performance Metrics	1993	D
3.1.1.9.1.3 Operational Performance Metrics	1994	D
3.1.1.9.1.3 Operational Performance Metrics	1995	D
3.1.1.9.1.3 Operational Performance Metrics	1996	D
3.1.1.9.1.3 Operational Performance Metrics	1997	D
3.1.1.9.1.3 Operational Performance Metrics	1998	D
3.1.1.9.1.3 Operational Performance Metrics	1999	D
3.1.1.9.1.3 Operational Performance Metrics	2000	D
3.1.1.9.1.3 Operational Performance Metrics	2001	D
3.1.1.9.1.3 Operational Performance Metrics	2002	D
3.1.1.9.1.3 Operational Performance Metrics	2003	D
3.1.1.9.1.3 Operational Performance Metrics	2004	D
3.1.1.9.1.3 Operational Performance Metrics	2005	D
3.1.1.9.1.3 Operational Performance Metrics	2006	D
3.1.1.9.1.3 Operational Performance Metrics	2007	D
3.1.1.9.1.3 Operational Performance Metrics	2008	D
3.1.1.9.1.3 Operational Performance Metrics	2009	D
3.1.1.9.1.3 Operational Performance Metrics	2010	D
3.1.1.9.1.3 Operational Performance Metrics	2011	D
3.1.1.9.1.3 Operational Performance Metrics	2012	D
3.1.1.9.1.3 Operational Performance Metrics	2013	D
3.1.1.9.1.3 Operational Performance Metrics	2014	D
3.1.1.9.1.3 Operational Performance Metrics	2015	D
3.1.1.9.1.3 Operational Performance Metrics	2016	D
3.1.1.9.1.3 Operational Performance Metrics	2017	D
3.1.1.9.1.3 Operational Performance Metrics	2018	D
3.1.1.9.1.3 Operational Performance Metrics	2019	D
3.1.1.9.1.3 Operational Performance Metrics	2020	D
3.1.1.9.1.3 Operational Performance Metrics	2021	D
3.1.1.9.1.3 Operational Performance Metrics	2022	D
3.1.1.9.1.3 Operational Performance Metrics	2023	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.9.1.3 Operational Performance Metrics	2024	D
3.1.1.9.1.3 Operational Performance Metrics	2025	D
3.1.1.9.1.3 Operational Performance Metrics	2026	D
3.1.1.9.1.3 Operational Performance Metrics	2027	D
3.1.1.9.1.3 Operational Performance Metrics	2028	D
3.1.1.9.1.3 Operational Performance Metrics	2029	D
3.1.1.9.1.4 User Comment Form Metrics	2037	D
3.1.1.9.1.4 User Comment Form Metrics	2038	D
3.1.1.9.1.4 User Comment Form Metrics	2039	D
3.1.1.9.1.4 User Comment Form Metrics	2040	D
3.1.1.9.2 Monitor System	2041	D
3.1.1.9.2 Monitor System	2042	D
3.1.1.9.2 Monitor System	2043	D
3.1.1.9.2 Monitor System	2044	D
3.1.1.9.2 Monitor System	2045	D
3.1.1.9.2 Monitor System	2046	D
3.1.1.9.2 Monitor System	2047	D
3.1.1.9.2 Monitor System	2048	D
3.1.1.9.2 Monitor System	2049	D
3.1.1.9.2 Monitor System	2050	D
3.1.1.9.2 Monitor System	2051	D
3.1.1.9.3 Workstation Configuration	2052	D
3.1.1.9.3 Workstation Configuration	2053	D
3.1.1.9.4 User Assignments	2054	D
3.1.1.9.4 User Assignments	2055	D
3.1.1.9.4 User Assignments	2056	D
3.1.1.9.4 User Assignments	2057	D
3.1.1.9.5 Local Knowledge	2058	D
3.1.1.9.5 Local Knowledge	2059	D
3.1.1.9.5 Local Knowledge	2060	D
3.1.1.9.5 Local Knowledge	2061	D
3.1.1.9.5 Local Knowledge	2062	D
3.1.1.9.6 Monitoring States and Modes	2063	D
3.1.1.9.6 Monitoring States and Modes	2064	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.9.6 Monitoring States and Modes	2065	D
3.1.1.9.6 Monitoring States and Modes	2066	D
3.1.1.10 Continuous Data Recording	2067	I
3.1.1.10 Continuous Data Recording	2068	D
3.1.1.10 Continuous Data Recording	2069	D
3.1.1.10 Continuous Data Recording	2070	D
3.1.1.10 Continuous Data Recording	2071	D
3.1.1.10 Continuous Data Recording	2072	D
3.1.1.10 Continuous Data Recording	2073	D
3.1.1.10 Continuous Data Recording	2074	D
3.1.1.10 Continuous Data Recording	2075	D
3.1.1.10 Continuous Data Recording	2076	D
3.1.1.10 Continuous Data Recording	2077	D
3.1.1.10 Continuous Data Recording	2078	D
3.1.1.10 Continuous Data Recording	2079	D
3.1.1.10 Continuous Data Recording	2080	D
3.1.1.10 Continuous Data Recording	2081	D
3.1.1.10 Continuous Data Recording	2082	D
3.1.1.10 Continuous Data Recording	2083	D
3.1.1.10 Continuous Data Recording	2084	D
3.1.1.10 Continuous Data Recording	2085	D
3.1.1.10 Continuous Data Recording	2086	D
3.1.1.10 Continuous Data Recording	2087	D
3.1.1.10 Continuous Data Recording	2088	D
3.1.1.10 Continuous Data Recording	2089	D
3.1.1.10 Continuous Data Recording	2090	D
3.1.1.11 Event Reconstruction	2091	D
3.1.1.11 Event Reconstruction	2092	A
3.1.1.11 Event Reconstruction	2093	D
3.1.1.11 Event Reconstruction	2094	D
3.1.1.11 Event Reconstruction	2095	D
3.1.1.11 Event Reconstruction	2096	D
3.1.1.11 Event Reconstruction	2097	D
3.1.1.11 Event Reconstruction	2098	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.11 Event Reconstruction	2099	D
3.1.1.11 Event Reconstruction	2100	D
3.1.1.11 Event Reconstruction	2101	D
3.1.1.11 Event Reconstruction	2102	D
3.1.1.11 Event Reconstruction	2103	D
3.1.1.11 Event Reconstruction	2104	D
3.1.1.11 Event Reconstruction	2105	D
3.1.1.11 Event Reconstruction	2106	D
3.1.1.11 Event Reconstruction	2107	D
3.1.1.11 Event Reconstruction	2108	D
3.1.1.11 Event Reconstruction	2109	D
3.1.1.11 Event Reconstruction	2110	D
3.1.1.11 Event Reconstruction	2111	D
3.1.1.11 Event Reconstruction	2112	D
3.1.1.11 Event Reconstruction	2113	D
3.1.1.11 Event Reconstruction	2114	D
3.1.1.11 Event Reconstruction	2115	D
3.1.1.11 Event Reconstruction	2116	D
3.1.1.11 Event Reconstruction	2117	D
3.1.1.11 Event Reconstruction	2118	D
3.1.1.11 Event Reconstruction	2119	D
3.1.1.11 Event Reconstruction	2120	D
3.1.1.11 Event Reconstruction	2121	D
3.1.1.11 Event Reconstruction	2122	D
3.1.1.11 Event Reconstruction	2123	D
3.1.1.11 Event Reconstruction	2124	D
3.1.1.11 Event Reconstruction	2125	D
3.1.1.11 Event Reconstruction	2126	D
3.1.1.11 Event Reconstruction	2127	D
3.1.1.11 Event Reconstruction	2128	D
3.1.1.11 Event Reconstruction	2129	D
3.1.1.11 Event Reconstruction	2130	D
3.1.1.11 Event Reconstruction	2131	D
3.1.1.11 Event Reconstruction	2132	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.11 Event Reconstruction	2133	D
3.1.1.11 Event Reconstruction	2134	D
3.1.1.11 Event Reconstruction	2135	D
3.1.1.11 Event Reconstruction	2136	D
3.1.1.11 Event Reconstruction	2137	D
3.1.1.11 Event Reconstruction	2138	D
3.1.1.12 Monitor and Control	2139	D
3.1.1.12 Monitor and Control	2140	D
3.1.1.12 Monitor and Control	2141	D
3.1.1.12 Monitor and Control	2142	D
3.1.1.12 Monitor and Control	2143	D
3.1.1.12 Monitor and Control	2144	D
3.1.1.12 Monitor and Control	2145	D
3.1.1.12 Monitor and Control	2146	D
3.1.1.12 Monitor and Control	2147	D
3.1.1.12 Monitor and Control	2148	D
3.1.1.12 Monitor and Control	2149	D
3.1.1.12 Monitor and Control	2150	D
3.1.1.12 Monitor and Control	2151	D
3.1.1.12 Monitor and Control	2152	D
3.1.1.12 Monitor and Control	2153	D
3.1.1.12 Monitor and Control	2154	D
3.1.1.12 Monitor and Control	2155	D
3.1.1.12 Monitor and Control	2156	D
3.1.1.12 Monitor and Control	2157	D
3.1.1.13 Reserved	--	
3.1.1.14 Alternate Access	2159	D
3.1.1.14 Alternate Access	2160	D
3.1.1.14.2 Remote User Access Terminal	2198	D
3.1.1.14.2 Remote User Access Terminal	2199	D
3.1.1.14.2 Remote User Access Terminal	2200	D
3.1.1.14.2 Remote User Access Terminal	2201	D
3.1.1.14.2 Remote User Access Terminal	2202	D
3.1.1.14.2 Remote User Access Terminal	2203	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.14.2 Remote User Access Terminal	2204	D
3.1.1.14.4 Exportable Activity Reports	2214	D
3.1.1.15 Automated Text to Voice (ATTV) Processing	2219	D
3.1.1.15 Automated Text to Voice (ATTV) Processing	2220	D
3.1.1.15 Automated Text to Voice (ATTV) Processing	2221	D
3.1.1.15 Automated Text to Voice (ATTV) Processing	2222	D
3.1.1.15 Automated Text to Voice (ATTV) Processing	2223	D
3.1.2 AFSM External Interfaces	2226	I
3.1.2 AFSM External Interfaces	2227	I
3.1.2 AFSM External Interfaces	2228	I
3.1.2.1 Required AFSM External Interfaces	--	
3.1.2.1.1 Air Marine Operational Center	2229	T
3.1.2.1.2 Direct User Access Terminal (DUAT) System	2230	T
3.1.2.1.3 Direct User Access Terminal System (DUATs)	2231	T
3.1.2.1.4 En Route Automation Modernization (ERAM) System	2232	T
3.1.2.1.5 Flight Data Processing 2000 (FDP 2000)	2233	T
3.1.2.1.6 Host Computer System (HCS)	2234	T
3.1.2.1.7 NAVCANADA	2235	T
3.1.2.1.8 Flight Service for the 21st Century (FS21) System	2236	T
3.1.2.1.9 North American Aerospace Defense Command (NORAD)	2237	T
3.1.2.1.10 Operational and Supportability Implementation System (OASIS)	2238	T
3.1.2.1.11 Military Base Operations (MBO)	2239	T
3.1.2.1.12 Air Traffic Control System Command Center (ATCSCC)	2240	T
3.1.2.1.13 United States NOTAM System (USNS)	2241	T
3.1.2.1.14 El Paso Intelligence Center (EPIC)	2242	T
3.1.2.1.15 Weather Message Switching Center Replacement (WMSCR)	2243	T
3.1.2.1.17 Air Traffic Organization Operational Data Store (ATO ODS)	2245	T
3.1.2.1.18 FAA Weather Camera programs	2246	T

Specification Paragraph	Req. Number	Verification Method
3.1.2.1.19 Starcaster	2247	T
3.1.2.1.21 Foreign Air Traffic Control (ATC)	3065	T
3.1.2.1.22 Advanced Technologies and Oceanic Procedures (ATOP)	3066	T
3.1.2.2 Optional AFSM External Interfaces	--	
3.1.2.2.1 AWOS Data Acquisition System (ADAS)	--	T
3.1.2.2.2 Automatic Dependent Surveillance-Broadcast (ADS-B)	--	T
3.1.2.2.3 Automated Flight Following (AFF)	--	T
3.1.2.2.4 Automated Surface Observation System (ASOS)	--	T
3.1.2.2.5 Aviation Weather Sensor System (AWSS)	--	T
3.1.2.2.6 CAPSTONE	--	T
3.1.2.2.7 Juneau Airport Wind System (JAWS)	--	T
3.1.2.2.8 Micro En Route Automated Radar Tracking System (MEARTS)	--	T
3.1.2.2.9 NAS Aeronautical Information Management Enterprise System (NAIMES)	--	T
3.1.2.2.10 Next Generation Weather Radar (NEXRAD)	--	T
3.1.2.2.11 National Oceanic and Atmospheric Administration (NOAA) Port	--	T
3.1.2.2.12 National Weather Service (NWS)	--	T
3.1.2.2.13 Special Use Airspace Management System, (SAMS)	--	T
3.1.2.2.14 Weather Information Network Server (WINS)	--	T
3.1.3 Major Components	--	
3.1.4 FAA and Government Furnished Information	--	
3.1.5 System States and Modes	--	
3.1.5.1 System States	--	
3.1.5.1.1 System Capabilities	2249	D
3.1.5.1.1 System Capabilities	2250	D
3.1.5.1.1 System Capabilities	2251	D
3.1.5.1.1 System Capabilities	2252	D
3.1.5.1.1 System Capabilities	2253	D
3.1.5.1.1 System Capabilities	2254	D
3.1.5.1.1 System Capabilities	2255	D

Specification Paragraph	Req. Number	Verification Method
3.1.5.1.1 System Capabilities	2256	D
3.1.5.1.1 System Capabilities	2257	D
3.1.5.1.2 System Services	2258	D
3.1.5.1.2 System Services	2259	D
3.1.5.1.2 System Services	2260	D
3.1.5.1.2 System Services	2261	D
3.1.5.1.2 System Services	2262	D
3.1.5.1.2 System Services	2263	D
3.1.5.1.2 System Services	2264	D
3.1.5.1.2 System Services	2265	D
3.1.5.1.2 System Services	2266	D
3.1.5.1.2 System Services	2267	D
3.1.5.1.2 System Services	2268	D
3.1.5.1.2 System Services	2269	D
3.1.5.1.2 System Services	2270	D
3.1.5.1.2 System Services	2271	D
3.1.5.1.2 System Services	2272	D
3.1.5.1.2.1 System Service Transfer	2273	D
3.1.5.1.2.1 System Service Transfer	2274	D
3.1.5.1.2.1 System Service Transfer	2275	D
3.1.5.1.2.1 System Service Transfer	2276	D
3.1.5.1.2.1 System Service Transfer	2277	D
3.1.5.1.3 System Facility States	2278	D
3.1.5.1.3 System Facility States	2279	D
3.1.5.1.3 System Facility States	2280	D
3.1.5.1.3 System Facility States	2281	D
3.1.5.1.3 System Facility States	2282	D
3.1.5.1.3 System Facility States	2283	D
3.1.5.1.3 System Facility States	2284	D
3.1.5.2 System Modes	--	
3.1.5.2.1 Fully Operational System Mode	2285	D
3.1.5.2.2 Degraded System Mode	2286	D
3.1.5.2.2 Degraded System Mode	2287	D
3.1.5.2.2 Degraded System Mode	2288	D

Specification Paragraph	Req. Number	Verification Method
3.1.5.2.3 Catastrophic System Mode	2289	D
3.2 Performance	--	
3.2.1 Operational Performance	--	
3.2.1.1 Operational Safety	--	
3.2.1.2 Operational Safety Requirements	2290	A
3.2.1.2 Operational Safety Requirements	2291	A
3.2.1.2 Operational Safety Requirements	2292	A
3.2.1.2 Operational Safety Requirements	2293	A
3.2.1.2 Operational Safety Requirements	2294	A
3.2.1.2 Operational Safety Requirements	2295	A
3.2.1.2 Operational Safety Requirements	2296	A
3.2.1.2 Operational Safety Requirements	2297	A
3.2.1.2 Operational Safety Requirements	2298	A
3.2.1.2 Operational Safety Requirements	2299	A
3.2.1.2 Operational Safety Requirements	2300	A
3.2.1.2 Operational Safety Requirements	2301	A
3.2.1.2 Operational Safety Requirements	2302	A
3.2.1.2 Operational Safety Requirements	2303	A
3.2.1.2 Operational Safety Requirements	2304	A
3.2.1.2 Operational Safety Requirements	2305	A
3.2.1.2 Operational Safety Requirements	2306	A
3.2.1.2 Operational Safety Requirements	2307	A
3.2.1.2 Operational Safety Requirements	2308	A
3.2.1.2 Operational Safety Requirements	2309	A
3.2.1.2 Operational Safety Requirements	2310	A
3.2.1.3 Fail-Safe	2311	I
3.2.1.3 Fail-Safe	2312	I
3.2.1.4 Operational Safety Human Factors	2313	A
3.2.1.4.1 Consistency	2314	I
3.2.1.4.1 Consistency	2315	I
3.2.1.4.2 Standardization	2316	I
3.2.1.4.2 Standardization	2998	I
3.2.1.4.2 Standardization	2999	I
3.2.1.4.3 User-Centered Perspective	2317	I

Specification Paragraph	Req. Number	Verification Method
3.2.1.4.3 User-Centered Perspective	3000	I
3.2.1.4.3 User-Centered Perspective	3001	I
3.2.1.4.3 User-Centered Perspective	3002	I
3.2.1.4.3 User-Centered Perspective	3003	I
3.2.1.4.3 User-Centered Perspective	3004	I
3.2.1.4.3 User-Centered Perspective	3005	I
3.2.1.5 Operational Performance Response Times	2318	T
3.2.2 Physical	--	
3.2.2.1 General Physical Characteristic	2319	I
3.2.2.1 General Physical Characteristic	2320	I
3.2.2.1 General Physical Characteristic	2321	I
3.2.2.2 Design and Construction	2322	I
3.2.2.2 Design and Construction	2323	I
3.2.2.2 Design and Construction	2324	I
3.2.2.2 Design and Construction	2325	I
3.2.2.2 Design and Construction	2326	I
3.2.2.2 Design and Construction	2327	I
3.2.2.2 Design and Construction	2328	I
3.2.2.2 Design and Construction	3064	I
3.2.2.3 Materials and Parts	2329	I
3.2.2.3 Materials and Parts	2330	I
3.2.2.3 Materials and Parts	2331	I
3.2.2.1 Equipment Size	2332	I
3.2.2.1 Equipment Size	2333	I
3.2.2.1 Equipment Size	2334	I
3.2.2.1 Equipment Size	2335	I
3.2.2.1 Equipment Size	2336	I
3.2.2.1 Equipment Size	2337	I
3.2.2.1 Equipment Size	2338	I
3.2.2.1 Equipment Size	2339	I
3.2.2.1 Equipment Size	2340	I
3.2.2.1 Equipment Size	2341	I
3.2.2.1 Equipment Size	2342	I
3.2.2.1 Equipment Size	2343	I
3.2.2.4 Weight	2344	I

Specification Paragraph	Req. Number	Verification Method
3.2.2.4 Weight	2345	I
3.2.2.6 Color and Finish	2346	I
3.2.2.6 Color and Finish	2347	I
3.2.2.6 Color and Finish	2348	I
3.2.2.6 Color and Finish	2349	I
3.2.2.6 Color and Finish	2350	I
3.2.2.7 Labeling	2351	I
3.2.2.7 Labeling	2352	I
3.2.2.7 Labeling	2353	I
3.2.2.8 Accessibility	2354	I
3.2.2.9 Loading and Installation	2355	I
3.2.2.9 Loading and Installation	2356	I
3.2.2.9 Loading and Installation	2357	I
3.2.2.9 Loading and Installation	2358	I
3.2.2.9 Loading and Installation	2359	I
3.2.2.9 Loading and Installation	2360	I
3.2.2.9 Loading and Installation	2361	I
3.2.2.910 Handling	2362	I
3.2.2.910 Handling	2363	I
3.2.2.10 Handling	2364	I
3.2.2.11 Space Allocation	2365	I
3.2.2.11 Space Allocation	2366	I
3.2.2.12 Structural and Seismic Stability	2367	I
3.2.2.13 Grounding, Bonding, Shielding, and Lightning Protection	2368	I
3.2.2.13 Grounding, Bonding, Shielding, and Lightning Protection	2369	I
3.2.3 Reliability / Availability	--	
3.2.3.1 Reliability	2370	A
3.2.3.1 Reliability	2371	A
3.2.3.2 Availability	2372	A
3.2.3.2 Availability	2373	A
3.2.4 Maintainability	--	
3.2.4.1 Reliability Centered Maintenance	2374	D
3.2.4.2 Maintainability Functional Requirements	2375	D

Specification Paragraph	Req. Number	Verification Method
3.2.4.2 Maintainability Functional Requirements	2376	D
3.2.4.2 Maintainability Functional Requirements	2377	D
3.2.4.2 Maintainability Functional Requirements	2378	D
3.2.4.2 Maintainability Functional Requirements	3006	D
3.2.4.2 Maintainability Functional Requirements	3007	D
3.2.4.2 Maintainability Functional Requirements	3008	D
3.2.4.2 Maintainability Functional Requirements	3009	D
3.2.4.2 Maintainability Functional Requirements	2379	D
3.2.4.2 Maintainability Functional Requirements	2380	D
3.2.4.2 Maintainability Functional Requirements	2381	D
3.2.4.3 First Level Maintenance Requirements	2382	D
3.2.4.3 First Level Maintenance Requirements	2383	D
3.2.4.3 First Level Maintenance Requirements	2384	D
3.2.4.3 First Level Maintenance Requirements	2385	D
3.2.4.3 First Level Maintenance Requirements	2386	D
3.2.4.3 First Level Maintenance Requirements	2387	D
3.2.4.3 First Level Maintenance Requirements	2388	D
3.2.4.3.1 Maintenance Workstation	2389	I
3.2.4.3.1 Maintenance Workstation	2390	I
3.2.4.3.1 Maintenance Workstation	2391	I
3.2.4.3.1 Maintenance Workstation	2392	I
3.2.4.3.1 Maintenance Workstation	2393	I
3.2.4.3.1 Maintenance Workstation	2394	I
3.2.4.3.1 Maintenance Workstation	2395	I
3.2.4.3.1 Maintenance Workstation	3010	I
3.2.4.3.1 Maintenance Workstation	3011	I
3.2.4.3.1 Maintenance Workstation	3012	I
3.2.4.3.1 Maintenance Workstation	3013	I
3.2.4.3.1 Maintenance Workstation	3014	I
3.2.4.3.1 Maintenance Workstation	3015	I
3.2.4.3.1 Maintenance Workstation	3016	I
3.2.4.3.1 Maintenance Workstation	3017	I
3.2.4.3.1 Maintenance Workstation	3018	I
3.2.4.3.1 Maintenance Workstation	3019	I

Specification Paragraph	Req. Number	Verification Method
3.2.4.3.1 Maintenance Workstation	3020	I
3.2.4.3.1 Maintenance Workstation	3021	I
3.2.4.3.1 Maintenance Workstation	3022	I
3.2.4.3.1 Maintenance Workstation	3023	I
3.2.4.3.1 Maintenance Workstation	3024	I
3.2.4.3.1 Maintenance Workstation	3025	I
3.2.4.3.1 Maintenance Workstation	3026	I
3.2.4.3.1 Maintenance Workstation	2396	I
3.2.4.3.1 Maintenance Workstation	2397	I
3.2.4.3.1 Maintenance Workstation	2398	I
3.2.4.3.1 Maintenance Workstation	2399	I
3.2.4.3.1 Maintenance Workstation	2400	I
3.2.4.3.1 Maintenance Workstation	2401	I
3.2.4.3.1 Maintenance Workstation	2402	I
3.2.4.3.1 Maintenance Workstation	2403	I
3.2.4.3.1 Maintenance Workstation	2404	I
3.2.4.3.1 Maintenance Workstation	2405	I
3.2.4.3.1 Maintenance Workstation	2406	I
3.2.4.3.1 Maintenance Workstation	2407	I
3.2.4.3.1 Maintenance Workstation	2408	I
3.2.4.3.1 Maintenance Workstation	2409	I
3.2.4.3.3 Service Operations Center (SOC)	2417	I
3.2.4.3.3 Service Operations Center (SOC)	2418	I
3.2.4.4 Second Level Maintenance Requirement	--	
3.2.4.4.1 Maintenance Support of System	2419	D
3.2.4.4.1 Maintenance Support of System	2420	D
3.2.4.4.1 Maintenance Support of System	2421	D
3.2.4.4.1 Maintenance Support of System	2422	D
3.2.4.4.1 Maintenance Support of System	2423	D
3.2.4.4.1 Maintenance Support of System	2424	D
3.2.4.4.1 Maintenance Support of System	2425	D
3.2.4.4.1 Maintenance Support of System	2426	D
3.2.4.4.2 Configuration Management	2427	I
3.2.4.4.2 Configuration Management	2428	I

Specification Paragraph	Req. Number	Verification Method
3.2.4.4.2 Configuration Management	2429	I
3.2.4.4.3 Maintenance Support of Software and Databases	2430	I
3.2.4.4.3 Maintenance Support of Software and Databases	2431	I
3.2.4.4.3 Maintenance Support of Software and Databases	2432	I
3.2.4.4.3 Maintenance Support of Software and Databases	2433	I
3.2.4.4.3 Maintenance Support of Software and Databases	2434	I
3.2.4.4.3 Maintenance Support of Software and Databases	2435	I
3.2.4.4.3 Maintenance Support of Software and Databases	2436	D
3.2.4.4.3 Maintenance Support of Software and Databases	2437	D
3.2.4.4.3 Maintenance Support of Software and Databases	2438	D
3.2.4.4.3 Maintenance Support of Software and Databases	2439	D
3.2.4.4.3 Maintenance Support of Software and Databases	2440	D
3.2.4.4.3 Maintenance Support of Software and Databases	2441	D
3.2.4.4.3 Maintenance Support of Software and Databases	2442	D
3.2.4.4.3 Maintenance Support of Software and Databases	2443	D
3.2.4.4.3 Maintenance Support of Software and Databases	2444	D
3.2.4.4.3 Maintenance Support of Software and Databases	2445	D
3.2.4.4.3 Maintenance Support of Software and Databases	2446	D
3.2.4.4.3 Maintenance Support of Software and Databases	2447	D
3.2.4.4.3 Maintenance Support of Software and Databases	2448	D
3.2.4.4.3 Maintenance Support of Software and Databases	2449	D
3.2.4.4.3 Maintenance Support of Software and Databases	2450	D
3.2.4.4.3 Maintenance Support of Software and Databases	2451	D
3.2.4.4.3 Maintenance Support of Software and Databases	2452	D
3.2.4.4.3 Maintenance Support of Software and Databases	2453	D
3.2.4.4.3 Maintenance Support of Software and Databases	2454	D
3.2.4.4.3 Maintenance Support of Software and Databases	2455	D
3.2.4.4.3 Maintenance Support of Software and Databases	2456	D
3.2.4.4.3 Maintenance Support of Software and Databases	2457	D
3.2.4.4.3 Maintenance Support of Software and Databases	2458	D
3.2.4.4.3 Maintenance Support of Software and Databases	2459	D
3.2.4.4.3 Maintenance Support of Software and Databases	2460	D
3.2.4.4.3 Maintenance Support of Software and Databases	2461	D
3.2.4.4.3 Maintenance Support of Software and Databases	2462	D

Specification Paragraph	Req. Number	Verification Method
3.2.4.4.3 Maintenance Support of Software and Databases	2463	D
3.2.4.4.3 Maintenance Support of Software and Databases	2464	D
3.2.4.4.3 Maintenance Support of Software and Databases	2465	D
3.2.4.4.3 Maintenance Support of Software and Databases	2466	D
3.2.4.4.3 Maintenance Support of Software and Databases	2467	D
3.2.4.4.3 Maintenance Support of Software and Databases	2468	D
3.2.4.4.3 Maintenance Support of Software and Databases	2469	D
3.2.4.4.3 Maintenance Support of Software and Databases	2470	D
3.2.4.4.3 Maintenance Support of Software and Databases	2471	D
3.2.4.4.3 Maintenance Support of Software and Databases	2472	D
3.2.4.4.3 Maintenance Support of Software and Databases	2473	D
3.2.4.4.3 Maintenance Support of Software and Databases	2474	D
3.2.4.4.3 Maintenance Support of Software and Databases	2475	D
3.2.4.4.3 Maintenance Support of Software and Databases	2476	D
3.2.4.4.3 Maintenance Support of Software and Databases	2477	D
3.2.4.4.3 Maintenance Support of Software and Databases	2478	D
3.2.4.4.3 Maintenance Support of Software and Databases	2479	D
3.2.4.4.3 Maintenance Support of Software and Databases	2480	D
3.2.4.4.3 Maintenance Support of Software and Databases	2481	D
3.2.4.4.3 Maintenance Support of Software and Databases	2482	D
3.2.4.4.3 Maintenance Support of Software and Databases	2483	D
3.2.4.4.3 Maintenance Support of Software and Databases	2484	D
3.2.4.4.3 Maintenance Support of Software and Databases	2485	D
3.2.4.4.3 Maintenance Support of Software and Databases	2486	D
3.2.4.4.3 Maintenance Support of Software and Databases	2487	D
3.2.4.4.3 Maintenance Support of Software and Databases	2488	D
3.2.4.4.3 Maintenance Support of Software and Databases	2489	D
3.2.4.4.3 Maintenance Support of Software and Databases	2490	D
3.2.4.4.3 Maintenance Support of Software and Databases	2491	D
3.2.4.4.3 Maintenance Support of Software and Databases	2492	D
3.2.4.4.3 Maintenance Support of Software and Databases	2493	D
3.2.4.4.3 Maintenance Support of Software and Databases	2494	D
3.2.4.4.3 Maintenance Support of Software and Databases	2495	D
3.2.4.4.4 Monitoring and Control	2496	D

Specification Paragraph	Req. Number	Verification Method
3.2.4.4.4 Monitoring and Control	2497	D
3.2.4.4.4 Monitoring and Control	2498	D
3.2.4.4.4 Monitoring and Control	2499	D
3.2.4.4.4 Monitoring and Control	2500	D
3.2.4.4.4 Monitoring and Control	2501	D
3.2.4.4.4 Monitoring and Control	2502	D
3.2.4.4.4 Monitoring and Control	2503	D
3.2.4.4.5 Test Tools	2504	D
3.2.4.4.5 Test Tools	2505	D
3.2.4.4.5 Test Tools	2506	D
3.2.4.4.5 Test Tools	2507	D
3.2.4.4.5 Test Tools	2508	D
3.2.4.4.5 Test Tools	2509	D
3.2.4.4.5 Test Tools	2510	D
3.2.4.4.5 Test Tools	2511	D
3.2.4.4.5 Test Tools	2512	D
3.2.4.4.5 Test Tools	2513	D
3.2.4.4.5 Test Tools	2514	D
3.2.4.4.5 Test Tools	2515	D
3.2.4.4.5 Test Tools	2516	D
3.2.4.4.5 Test Tools	2517	D
3.2.4.4.5 Test Tools	2518	D
3.2.4.4.5 Test Tools	2519	D
3.2.5 Recovery	--	
3.2.5.1 Recovery From Power Reset of the System	2520	D
3.2.5.1 Recovery From Power Reset of the System	2521	D
3.2.5.1 Recovery From Power Reset of the System	2522	D
3.2.5.2 Recovery from a system reset	2523	D
3.2.5.2 Recovery from a system reset	2524	D
3.2.5.2 Recovery from a system reset	2525	D
3.2.5.3 Recovery of essential data	2526	D
3.2.5.3 Recovery of essential data	2527	D
3.2.5.3 Recovery of essential data	2528	D
3.2.5.3 Recovery of essential data	2529	D

Specification Paragraph	Req. Number	Verification Method
3.2.5.3 Recovery of essential data	2530	D
3.2.6 Reserve	2531	A
3.2.6 Reserve	2532	A
3.2.6 Reserve	2533	A
3.2.7 Portability	2534	I
3.2.7 Portability	2535	I
3.2.7 Portability	2536	I
3.2.7 Portability	2537	I
3.2.8 Environments	--	
3.2.8.1 General Environment Characteristics	2538	I
3.2.8.1 General Environment Characteristics	2539	I
3.2.8.1 General Environment Characteristics	2540	I
3.2.8.1 General Environment Characteristics	2541	I
3.2.8.1 General Environment Characteristics	2542	I
3.2.8.2 Environmental Characteristics of the AFSS/FSS Equipment Room System Components	2543	I
3.2.8.2 Environmental Characteristics of the AFSS/FSS Equipment Room System Components	2544	I
3.2.8.2 Environmental Characteristics of the AFSS/FSS Equipment Room System Components	2545	I
3.2.8.2 Environmental Characteristics of the AFSS/FSS Equipment Room System Components	2546	I
3.2.8.2 Environmental Characteristics of the AFSS/FSS Equipment Room System Components	2547	I
3.2.8.2 Environmental Characteristics of the AFSS/FSS Equipment Room System Components	2548	I
3.2.8.3 Environmental Characteristics of the AFSS/FSS Operations Room System Components	2549	I
3.2.8.3 Environmental Characteristics of the AFSS/FSS Operations Room System Components	2550	I
3.2.8.3 Environmental Characteristics of the AFSS/FSS Operations Room System Components	2551	I
3.2.8.3 Environmental Characteristics of the AFSS/FSS Operations Room System Components	2552	I

Specification Paragraph	Req. Number	Verification Method
3.2.8.3 Environmental Characteristics of the AFSS/FSS Operations Room System Components	2553	I
3.3 System Characteristics	--	
3.3.1 Safety	--	
3.3.1.1 Personnel Safety	2554	I
3.3.1.1 Personnel Safety	2555	I
3.3.1.1 Personnel Safety	2556	I
3.3.1.1 Personnel Safety	2557	I
3.3.1.1 Personnel Safety	2558	I
3.3.1.1 Personnel Safety	2559	I
3.3.1.1 Personnel Safety	2560	I
3.3.1.2 Electrical Safety	2561	I
3.3.1.2 Electrical Safety	2562	I
3.3.1.2 Electrical Safety	2563	I
3.3.1.2 Electrical Safety	2564	I
3.3.1.3 System Equipment –Related Personnel Safety	2565	I
3.3.1.3 System Equipment –Related Personnel Safety	2566	I
3.3.1.3 System Equipment –Related Personnel Safety	2567	I
3.3.1.3 System Equipment –Related Personnel Safety	2568	I
3.3.1.3 System Equipment –Related Personnel Safety	2569	I
3.3.1.4 Thermal Contact Hazards	2570	I
3.3.1.5 Physical Hazards	2571	I
3.3.1.5 Physical Hazards	2572	I
3.3.1.6 Liquid and Gas Hazards	2573	I
3.3.1.6 Liquid and Gas Hazards	2574	I
3.3.1.6 Liquid and Gas Hazards	2575	I
3.3.1.7 Toxic Hazards	2576	I
3.3.1.8 Radiation Hazards	2577	I
3.3.1.8 Radiation Hazards	2578	I
3.3.1.9 Protection from Special Chemicals	2579	I
3.3.1.10 Temperature Hazards	2580	I
3.3.1.11 Fire Protection	2581	I
3.3.1.11 Fire Protection	2582	I

Specification Paragraph	Req. Number	Verification Method
3.3.1.12 Noise Hazards	2583	I
3.3.1.12 Noise Hazards	2584	I
3.3.1.12 Noise Hazards	2585	I
3.3.1.13 Labeling and Markings	2586	I
3.3.1.13 Labeling and Markings	2587	I
3.3.1.13 Labeling and Markings	2588	I
3.3.1.13 Labeling and Markings	2589	I
3.3.2 Security	--	
3.3.2.1 General Security	2590	I
3.3.2.1 General Security	3027	I
3.3.2.1 General Security	3028	I
3.3.2.1 General Security	3029	I
3.3.2.1 General Security	2591	I
3.3.2.1 General Security	2592	I
3.3.2.1 General Security	2593	I
3.3.2.1 General Security	2594	I
3.3.2.1 General Security	2595	I
3.3.2.1 General Security	2596	I
3.3.2.1 General Security	2597	I
3.3.2.1 General Security	2598	I
3.3.2.1 General Security	2599	I
3.3.2.1 General Security	2600	I
3.3.2.1 General Security	2601	I
3.3.2.1 General Security	2602	I
3.3.2.2 Physical Security	2603	I
3.3.2.2 Physical Security	2604	I
3.3.2.3 Information Security	--	
3.3.2.3.1 System Integrity	2605	I
3.3.2.3.1 System Integrity	2606	I
3.3.2.3.1 System Integrity	2607	I
3.3.2.3.1 System Integrity	2608	I
3.3.2.3.2 Availability	2609	I
3.3.2.3.2 Availability	2610	I
3.3.2.3.2 Availability	2611	I

Specification Paragraph	Req. Number	Verification Method
3.3.2.3.2 Availability	2612	I
3.3.2.3.3 Confidentiality	2613	I
3.3.2.3.3 Confidentiality	2614	I
3.3.2.3.3 Confidentiality	2615	I
3.3.2.3.3 Confidentiality	2616	I
3.3.2.3.4 Non-Repudiation	2617	D
3.3.2.3.4 Non-Repudiation	2618	D
3.3.2.3.5 Access Control	2619	D
3.3.2.3.5 Access Control	2620	D
3.3.2.3.5 Access Control	2621	D
3.3.2.3.5 Access Control	3030	D
3.3.2.3.5 Access Control	2622	D
3.3.2.3.5 Access Control	2623	D
3.3.2.3.5 Access Control	2624	D
3.3.2.3.5 Access Control	2625	D
3.3.2.3.5 Access Control	2626	D
3.3.2.3.5 Access Control	2627	D
3.3.2.3.5 Access Control	2628	D
3.3.2.3.5 Access Control	2629	D
3.3.2.3.5 Access Control	2630	D
3.3.2.3.5 Access Control	2631	D
3.3.2.3.5 Access Control	2632	D
3.3.2.3.5 Access Control	2633	D
3.3.2.3.5 Access Control	3031	D
3.3.2.3.5 Access Control	3032	D
3.3.2.3.5 Access Control	3033	D
3.3.2.3.5 Access Control	3034	D
3.3.2.3.5 Access Control	2634	D
3.3.2.3.5 Access Control	2635	D
3.3.2.3.5 Access Control	2636	D
3.3.2.3.5 Access Control	2637	D
3.3.2.3.5 Access Control	2638	D
3.3.2.3.5 Access Control	2639	D
3.3.2.3.5 Access Control	2640	D

Specification Paragraph	Req. Number	Verification Method
3.3.2.3.5 Access Control	2641	D
3.3.2.3.5 Access Control	2642	D
3.3.2.3.5 Access Control	2643	D
3.3.2.3.5 Access Control	2644	D
3.3.2.3.5 Access Control	2645	D
3.3.2.3.5 Access Control	2646	D
3.3.2.3.5 Access Control	2647	D
3.3.2.3.5 Access Control	2648	D
3.3.2.3.5 Access Control	2649	D
3.3.2.3.5 Access Control	2650	D
3.3.2.3.5 Access Control	2651	D
3.3.2.3.5 Access Control	2652	D
3.3.2.3.5 Access Control	2653	D
3.3.2.3.6 Identification and authentication	2654	D
3.3.2.3.6 Identification and authentication	2655	D
3.3.2.3.6 Identification and authentication	2656	D
3.3.2.3.6 Identification and authentication	2657	D
3.3.2.3.6 Identification and authentication	3035	D
3.3.2.3.6 Identification and authentication	3036	D
3.3.2.3.6 Identification and authentication	3037	D
3.3.2.3.6 Identification and authentication	3038	D
3.3.2.3.6 Identification and authentication	2658	D
3.3.2.3.6 Identification and authentication	2659	D
3.3.2.3.6 Identification and authentication	2660	D
3.3.2.3.6 Identification and authentication	2661	D
3.3.2.3.6 Identification and authentication	3039	D
3.3.2.3.6 Identification and authentication	3040	D
3.3.2.3.6 Identification and authentication	3041	D
3.3.2.3.6 Identification and authentication	2662	D
3.3.2.3.6 Identification and authentication	2663	D
3.3.2.3.6 Identification and authentication	2664	D
3.3.2.3.6 Identification and authentication	2665	D
3.3.2.3.7 Malicious Activity	2666	I
3.3.2.3.7 Malicious Activity	2667	I

Specification Paragraph		Req. Number	Verification Method
3.3.2.3.7	Malicious Activity	2668	I
3.3.2.3.7	Malicious Activity	2669	I
3.3.2.3.7	Malicious Activity	2670	I
3.3.2.3.7	Malicious Activity	2671	I
3.3.2.3.7	Malicious Activity	2672	I
3.3.2.3.7	Malicious Activity	2673	I
3.3.2.3.8	Security Operations	2674	I
3.3.2.3.8	Security Operations	2675	I
3.3.2.3.8	Security Operations	3042	I
3.3.2.3.8	Security Operations	3043	I
3.3.2.3.8	Security Operations	3044	I
3.3.2.3.8	Security Operations	2676	I
3.3.2.3.8	Security Operations	2677	I
3.3.2.3.8	Security Operations	2678	I
3.3.2.3.8	Security Operations	2679	I
3.3.2.3.9	Security Management	2680	I
3.3.2.3.9	Security Management	2681	I
3.3.2.3.9	Security Management	2682	I
3.3.2.3.9	Security Management	2683	I
3.3.2.3.9	Security Management	2684	I
3.3.2.3.9	Security Management	2685	I
3.3.2.3.9	Security Management	2686	I
3.3.2.3.9	Security Management	2687	I
3.3.2.3.9	Security Management	2688	I
3.3.2.3.9	Security Management	2689	I
3.3.2.3.9	Security Management	2690	I
3.3.2.3.9	Security Management	2691	I
3.3.2.3.9	Security Management	2692	I
3.3.2.3.9	Security Management	2693	I
3.3.2.3.10	Security Audit	2694	I
3.3.2.3.10	Security Audit	2695	I
3.3.2.3.10	Security Audit	2696	I
3.3.2.3.10	Security Audit	2697	I
3.3.2.3.10	Security Audit	2698	I

Specification Paragraph		Req. Number	Verification Method
3.3.2.3.10	Security Audit	2699	I
3.3.2.3.10	Security Audit	3045	I
3.3.2.3.10	Security Audit	3046	I
3.3.2.3.10	Security Audit	3047	I
3.3.2.3.10	Security Audit	3048	I
3.3.2.3.10	Security Audit	2700	I
3.3.2.3.10	Security Audit	2701	I
3.3.2.3.10	Security Audit	2702	I
3.3.2.3.10	Security Audit	2703	I
3.3.2.3.10	Security Audit	2704	I
3.3.2.3.10	Security Audit	2705	I
3.3.2.3.10	Security Audit	3049	I
3.3.2.3.10	Security Audit	3050	I
3.3.2.3.10	Security Audit	2706	I
3.3.2.3.10	Security Audit	2707	I
3.3.2.3.10	Security Audit	2708	I
3.3.2.3.10	Security Audit	2709	I
3.3.2.3.10	Security Audit	2710	I
3.3.2.3.10	Security Audit	3063	I
3.3.2.3.10	Security Audit	2711	I
3.3.2.3.10	Security Audit	2712	I
3.3.2.3.10	Security Audit	2713	I
3.3.2.3.10	Security Audit	2714	I
3.3.2.3.10	Security Audit	2715	I
3.3.2.3.10	Security Audit	3051	I
3.3.2.3.10	Security Audit	2716	I
3.3.2.3.10	Security Audit	3052	I
3.3.2.3.10	Security Audit	2717	I
3.3.2.3.10	Security Audit	2718	I
3.3.2.3.10	Recovery	2719	I
3.3.2.3.10	Recovery	2720	I
3.3.2.3.10	Recovery	2721	I
3.3.2.3.10	Recovery	2722	I
3.3.2.3.10	Recovery	2723	I

Specification Paragraph	Req. Number	Verification Method
3.3.2.3.10 Recovery	2724	I
3.3.2.3.10 Recovery	2725	I
3.3.2.3.10 Recovery	2726	I
3.3.2.4 Personnel Security	2727	I
3.3.2.4 Personnel Security	2728	I
3.3.2.4 Personnel Security	2729	I
3.3.2.4 Personnel Security	2730	I
3.3.2.4 Personnel Security	2731	I
3.3.2.5 Data Management	2732	I
3.3.2.5 Data Management	2733	I
3.3.2.5 Data Management	2734	I
3.3.2.5 Data Management	2735	I
3.3.2.5 Data Management	2736	I
3.3.2.5 Data Management	2737	I
3.3.2.5 Data Management	3053	I
3.3.2.5 Data Management	3054	I
3.3.2.5 Data Management	3055	I
3.3.2.5 Data Management	2739	I
3.3.2.5 Data Management	2740	I
3.3.2.5 Data Management	2741	I
3.3.2.5 Data Management	2742	I
3.3.2.5 Data Management	2743	I
3.3.3 Interchangeability	--	
3.3.4 Human Factors	--	
3.3.4.1 Computer-Human Interface (CHI)	2754	D
3.3.4.1.1 Displays	2755	D
3.3.4.1.1 Displays	2756	D
3.3.4.1.1 Displays	2757	D
3.3.4.1.1 Displays	2758	D
3.3.4.1.1 Displays	2759	D
3.3.4.1.1 Displays	2760	D
3.3.4.1.1 Displays	2761	D
3.3.4.1.1 Displays	2762	D
3.3.4.1.1 Displays	2763	D

Specification Paragraph	Req. Number	Verification Method
3.3.4.1.1 Displays	2764	D
3.3.4.1.1 Displays	2765	D
3.3.4.1.1 Displays	2766	D
3.3.4.1.1 Displays	2767	D
3.3.4.1.1 Displays	2768	D
3.3.4.1.1 Displays	2769	D
3.3.4.1.1 Displays	2770	D
3.3.4.1.1 Displays	2771	D
3.3.4.1.1 Displays	2772	D
3.3.4.1.1 Displays	2773	D
3.3.4.1.1 Displays	2774	D
3.3.4.1.1 Displays	2775	D
3.3.4.1.1 Displays	2776	D
3.3.4.1.1 Displays	2777	D
3.3.4.1.1 Displays	2778	D
3.3.4.1.1 Displays	2779	D
3.3.4.1.1 Displays	2780	D
3.3.4.1.1 Displays	2781	D
3.3.4.1.1 Displays	2782	D
3.3.4.1.1 Displays	2783	D
3.3.4.1.1 Displays	2784	D
3.3.4.1.1 Displays	2785	D
3.3.4.1.1 Displays	2786	D
3.3.4.1.1 Displays	2787	D
3.3.4.1.1 Displays	2788	D
3.3.4.1.1 Displays	2789	D
3.3.4.1.1 Displays	2790	D
3.3.4.1.1 Displays	2791	D
3.3.4.1.1 Displays	2792	D
3.3.4.1.1 Displays	2793	D
3.3.4.1.1 Displays	3056	D
3.3.4.1.1 Displays	3057	D
3.3.4.1.1 Displays	3058	D
3.3.4.1.1 Displays	3059	D

Specification Paragraph	Req. Number	Verification Method
3.3.4.1.1 Displays	2794	D
3.3.4.1.1 Displays	2795	D
3.3.4.1.1 Displays	2796	D
3.3.4.1.2 Data Entry	2797	D
3.3.4.1.2 Data Entry	2798	D
3.3.4.1.2 Data Entry	2799	D
3.3.4.1.2 Data Entry	2800	D
3.3.4.1.2 Data Entry	2801	D
3.3.4.1.2 Data Entry	2802	D
3.3.4.1.2 Data Entry	2803	D
3.3.4.1.2 Data Entry	2804	D
3.3.4.1.2 Data Entry	2805	D
3.3.4.1.2 Data Entry	2806	D
3.3.4.1.2 Data Entry	2807	D
3.3.4.1.2 Data Entry	2808	D
3.3.4.1.2 Data Entry	2809	D
3.3.4.1.2 Data Entry	2810	D
3.3.4.1.3 Maintainer Computer-Human Interface	2819	D
3.3.4.1.3 Maintainer Computer-Human Interface	2820	D
3.3.4.1.3 Maintainer Computer-Human Interface	2821	D
3.3.4.1.3 Maintainer Computer-Human Interface	2822	D
3.3.4.1.3 Maintainer Computer-Human Interface	2823	D
3.3.4.1.3 Maintainer Computer-Human Interface	2824	D
3.3.4.1.3 Maintainer Computer-Human Interface	2825	D
3.3.4.1.3 Maintainer Computer-Human Interface	2826	D
3.3.4.1.3 Maintainer Computer-Human Interface	2827	D
3.3.4.1.3 Maintainer Computer-Human Interface	2828	D
3.3.4.1.3 Maintainer Computer-Human Interface	2829	D
3.3.4.1.3 Maintainer Computer-Human Interface	2830	D
3.3.4.1.3 Maintainer Computer-Human Interface	2831	D
3.3.4.1.3 Maintainer Computer-Human Interface	2832	D
3.3.4.1.3 Maintainer Computer-Human Interface	2833	D
3.3.4.1.3 Maintainer Computer-Human Interface	2834	D
3.3.4.1.3 Maintainer Computer-Human Interface	2835	D

Specification Paragraph	Req. Number	Verification Method
3.3.5 Miscellaneous	--	
3.4 Logistics	--	
3.4.1 Maintenance	2836	I
3.4.1 Maintenance	2837	I
3.4.1 Maintenance	2838	I
3.4.2 Supply Support	--	
3.4.2.1 Depot Level Maintenance	2839	I
3.4.2.1 Depot Level Maintenance	2840	I
3.4.2.2 Warranty	2841	I
3.4.2.3 Field Level Maintenance Repair	2842	I
3.4.2.3 Field Level Maintenance Repair	2843	I
3.4.3 Bar Coding	2844	I
3.5 Personnel and Training	--	
3.6 Major Component Characteristics	--	
3.7 Precedence and Combined Characteristics	--	
3.7.1 Precedence	--	
3.7.2 Combined Characteristics	--	
4 Requirements Verification Correlation	--	
4.1 AFSM Verification	--	
4.2 Verification Methods	2845	I
4.2.1 Test	--	
4.2.2 Demonstration	--	
4.2.3 Analysis	--	
4.2.4 Inspection	--	
5 Delivery and Transition	--	
6 Acronyms and Glossary of Terms	--	
6.1 Acronyms and Abbreviations	--	
6.2 Glossary of Terms and Definitions	--	

Table 4-2 AFSM Automation System Tiered Requirements - Verification Correlation Matrix

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.2 Alphanumeric Weather Briefings	48	T
3.1.1.1.2.1 Standard Weather Briefing	55	D
3.1.1.1.2.1 Standard Weather Briefing	74	D
3.1.1.1.2.2 Abbreviated Weather Briefing	83	D
3.1.1.1.2.2 Abbreviated Weather Briefing	91	D
3.1.1.1.2.3 Outlook Weather Briefing	93	D
3.1.1.1.2.3 Outlook Weather Briefing	102	D
3.1.1.1.2.4 Delta Weather Briefing	103	D
3.1.1.1.2.4 Delta Weather Briefing	104	D
3.1.1.1.2.4 Delta Weather Briefing	105	D
3.1.1.1.2.4 Delta Weather Briefing	106	D
3.1.1.1.2.4 Delta Weather Briefing	107	D
3.1.1.1.2.4 Delta Weather Briefing	2883	D
3.1.1.1.2.4 Delta Weather Briefing	108	D
3.1.1.1.2.4 Delta Weather Briefing	109	D
3.1.1.1.2.4 Delta Weather Briefing	110	D
3.1.1.1.2.4 Delta Weather Briefing	111	D
3.1.1.1.2.4 Delta Weather Briefing	112	D
3.1.1.1.2.4 Delta Weather Briefing	113	D
3.1.1.1.2.4 Delta Weather Briefing	114	D
3.1.1.1.2.8 Trend Briefing Format	145	D
3.1.1.1.2.10 Forecast Winds and Temperature Aloft	167	D
3.1.1.1.3.1 Weather Graphic Products	194	D
3.1.1.1.3.2 Graphical Weather Briefings	216	D
3.1.1.1.3.2 Graphical Weather Briefings	217	D
3.1.1.1.3.2 Graphical Weather Briefings	218	D
3.1.1.1.3.2 Graphical Weather Briefings	219	D
3.1.1.1.3.2 Graphical Weather Briefings	220	D
3.1.1.1.3.2 Graphical Weather Briefings	221	D
3.1.1.1.3.2 Graphical Weather Briefings	222	D
3.1.1.1.3.2 Graphical Weather Briefings	223	D
3.1.1.1.3.2 Graphical Weather Briefings	2950	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.1.3.2 Graphical Weather Briefings	2951	D
3.1.1.1.3.2 Graphical Weather Briefings	2952	D
3.1.1.1.3.2 Graphical Weather Briefings	2953	D
3.1.1.1.3.2 Graphical Weather Briefings	2954	D
3.1.1.1.3.2 Graphical Weather Briefings	224	D
3.1.1.1.3.2 Graphical Weather Briefings	225	D
3.1.1.1.3.2 Graphical Weather Briefings	226	D
3.1.1.1.3.2 Graphical Weather Briefings	227	D
3.1.1.1.3.2 Graphical Weather Briefings	228	D
3.1.1.1.3.2 Graphical Weather Briefings	229	D
3.1.1.1.3.2 Graphical Weather Briefings	230	D
3.1.1.1.3.2 Graphical Weather Briefings	231	D
3.1.1.1.3.4 Dynamic Overlays	276	D
3.1.1.1.5 NOTAMs	335	D
3.1.1.2.15 Flight Plan Information History	882	D
3.1.1.2.17.4 Display Inbound Flight Plan List	973	D
3.1.1.2.17.4 Display Inbound Flight Plan List	974	D
3.1.1.2.17.4 Display Inbound Flight Plan List	975	D
3.1.1.2.17.4 Display Inbound Flight Plan List	976	D
3.1.1.3.2 Digital Flight Progress Strips	1002	D
3.1.1.3.2 Digital Flight Progress Strips	1003	D
3.1.1.3.2 Digital Flight Progress Strips	1004	D
3.1.1.3.2 Digital Flight Progress Strips	1005	D
3.1.1.3.2 Digital Flight Progress Strips	1006	D
3.1.1.3.2 Digital Flight Progress Strips	1007	D
3.1.1.3.2 Digital Flight Progress Strips	1008	D
3.1.1.3.2 Digital Flight Progress Strips	1009	D
3.1.1.3.2 Digital Flight Progress Strips	1010	D
3.1.1.3.2 Digital Flight Progress Strips	1011	D
3.1.1.3.2 Digital Flight Progress Strips	1012	D
3.1.1.3.2 Digital Flight Progress Strips	1013	D
3.1.1.3.2 Digital Flight Progress Strips	1014	D
3.1.1.3.2 Digital Flight Progress Strips	1015	D
3.1.1.3.2 Digital Flight Progress Strips	1016	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.3.2 Digital Flight Progress Strips	1017	D
3.1.1.3.2 Digital Flight Progress Strips	1018	D
3.1.1.3.2 Digital Flight Progress Strips	1019	D
3.1.1.3.2 Digital Flight Progress Strips	1020	D
3.1.1.3.2 Digital Flight Progress Strips	1021	D
3.1.1.3.2 Digital Flight Progress Strips	1022	D
3.1.1.3.2 Digital Flight Progress Strips	1023	D
3.1.1.3.2 Digital Flight Progress Strips	1024	D
3.1.1.3.2 Digital Flight Progress Strips	1025	D
3.1.1.3.2 Digital Flight Progress Strips	1026	D
3.1.1.3.2 Digital Flight Progress Strips	1027	D
3.1.1.3.2 Digital Flight Progress Strips	1028	D
3.1.1.3.2 Digital Flight Progress Strips	1029	D
3.1.1.3.2 Digital Flight Progress Strips	1030	D
3.1.1.3.2 Digital Flight Progress Strips	1031	D
3.1.1.3.2 Digital Flight Progress Strips	1032	D
3.1.1.3.2 Digital Flight Progress Strips	1033	D
3.1.1.3.2 Digital Flight Progress Strips	1034	D
3.1.1.3.3 In-Flight Work Queues	1053	D
3.1.1.3.3 In-Flight Work Queues	1054	D
3.1.1.3.4 Flight Plan Data Transfer	1057	D
3.1.1.3.4 Flight Plan Data Transfer	1058	D
3.1.1.3.4 Flight Plan Data Transfer	1059	D
3.1.1.3.4 Flight Plan Data Transfer	1060	D
3.1.1.3.5 Electronic Strip-Bay	1061	D
3.1.1.3.5 Electronic Strip-Bay	1062	D
3.1.1.3.5 Electronic Strip-Bay	1063	D
3.1.1.3.5 Electronic Strip-Bay	1064	D
3.1.1.3.5 Electronic Strip-Bay	1065	D
3.1.1.3.5 Electronic Strip-Bay	1066	D
3.1.1.3.5 Electronic Strip-Bay	1067	D
3.1.1.3.5 Electronic Strip-Bay	1068	D
3.1.1.3.5 Electronic Strip-Bay	1069	D
3.1.1.3.5 Electronic Strip-Bay	1070	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.3.5 Electronic Strip-Bay	1071	D
3.1.1.3.5 Electronic Strip-Bay	1072	D
3.1.1.3.5 Electronic Strip-Bay	1073	D
3.1.1.3.5 Electronic Strip-Bay	1074	D
3.1.1.3.5 Electronic Strip-Bay	1075	D
3.1.1.3.5 Electronic Strip-Bay	1076	D
3.1.1.3.5 Electronic Strip-Bay	1077	D
3.1.1.3.5 Electronic Strip-Bay	1078	D
3.1.1.3.5 Electronic Strip-Bay	1079	D
3.1.1.3.5.1 Active Flight Workspace	1080	D
3.1.1.3.5.1 Active Flight Workspace	1081	D
3.1.1.3.5.1 Active Flight Workspace	1082	D
3.1.1.3.5.1 Active Flight Workspace	1083	D
3.1.1.3.6 Airport Advisory Display	1084	D
3.1.1.3.6.1 Airport Diagram Graphic	1085	D
3.1.1.3.6.1 Airport Diagram Graphic	1086	D
3.1.1.3.6.1 Airport Diagram Graphic	1087	D
3.1.1.3.6.1 Airport Diagram Graphic	1088	D
3.1.1.3.6.1 Airport Diagram Graphic	1089	D
3.1.1.3.6.1 Airport Diagram Graphic	1090	D
3.1.1.3.6.1 Airport Diagram Graphic	1091	D
3.1.1.3.6.1 Airport Diagram Graphic	1092	D
3.1.1.3.6.1 Airport Diagram Graphic	1093	D
3.1.1.3.6.1 Airport Diagram Graphic	1094	D
3.1.1.3.6.2 Weather Information	1095	D
3.1.1.3.6.2 Weather Information	1096	D
3.1.1.3.6.2 Weather Information	1097	D
3.1.1.3.6.2 Weather Information	1098	D
3.1.1.3.6.2 Weather Information	1099	D
3.1.1.3.6.2 Weather Information	1100	D
3.1.1.3.6.2 Weather Information	1101	D
3.1.1.3.6.2 Weather Information	1102	D
3.1.1.3.6.2 Weather Information	1103	D
3.1.1.3.6.2 Weather Information	1104	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.3.6.3 NOTAMs	1105	D
3.1.1.3.6.3 NOTAMs	1106	D
3.1.1.3.6.3 NOTAMs	1107	D
3.1.1.3.6.3 NOTAMs	1108	D
3.1.1.3.6.3 NOTAMs	1109	D
3.1.1.3.6.3 NOTAMs	1110	D
3.1.1.3.6.4 AFIS Code	1111	D
3.1.1.3.6.5 Surface Area Control Status	1112	D
3.1.1.3.6.5 Surface Area Control Status	1113	D
3.1.1.3.6.6 Traffic Display	1114	D
3.1.1.3.6.6 Traffic Display	1115	D
3.1.1.3.6.6 Traffic Display	1116	D
3.1.1.3.6.6 Traffic Display	1117	D
3.1.1.3.6.6 Traffic Display	1118	D
3.1.1.3.6.6 Traffic Display	1119	D
3.1.1.3.6.6 Traffic Display	1120	D
3.1.1.3.6.6 Traffic Display	1121	D
3.1.1.3.6.6 Traffic Display	1122	D
3.1.1.3.6.6 Traffic Display	1123	D
3.1.1.3.6.6 Traffic Display	1124	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1125	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1126	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1127	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1128	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1129	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1130	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1131	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1132	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1133	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1134	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1135	D
3.1.1.3.6.7 Airport Advisory Strip-Bay	1136	D
3.1.1.3.6.7.1 Active Flight Workspace	1137	D
3.1.1.3.6.7.1 Active Flight Workspace	1138	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.3.6.7.1 Active Flight Workspace	1139	D
3.1.1.3.6.7.1 Active Flight Workspace	1140	D
3.1.1.3.6.8 Weather Briefing Request	1141	D
3.1.1.4.6 Automated Flight Plan Tracking	1222	D
3.1.1.4.6 Automated Flight Plan Tracking	1223	D
3.1.1.4.6 Automated Flight Plan Tracking	1224	D
3.1.1.4.6 Automated Flight Plan Tracking	1225	D
3.1.1.4.6 Automated Flight Plan Tracking	1226	D
3.1.1.4.6 Automated Flight Plan Tracking	1227	D
3.1.1.4.6 Automated Flight Plan Tracking	1228	D
3.1.1.4.6 Automated Flight Plan Tracking	1229	D
3.1.1.4.6 Automated Flight Plan Tracking	1230	D
3.1.1.4.6 Automated Flight Plan Tracking	1231	D
3.1.1.4.6 Automated Flight Plan Tracking	1232	D
3.1.1.4.6 Automated Flight Plan Tracking	1233	D
3.1.1.4.6 Automated Flight Plan Tracking	1234	D
3.1.1.4.6 Automated Flight Plan Tracking	1235	D
3.1.1.4.6 Automated Flight Plan Tracking	1236	D
3.1.1.4.6 Automated Flight Plan Tracking	1237	D
3.1.1.5.8 Flight Related Updates	1300	D
3.1.1.5.8 Flight Related Updates	1301	D
3.1.1.5.26 Aircraft Hexadecimal Database	1478	D
3.1.1.5.26 Aircraft Hexadecimal Database	1479	D
3.1.1.5.26 Aircraft Hexadecimal Database	1480	D
3.1.1.5.26 Aircraft Hexadecimal Database	1481	D
3.1.1.5.26 Aircraft Hexadecimal Database	1482	D
3.1.1.5.26 Aircraft Hexadecimal Database	1483	D
3.1.1.5.26 Aircraft Hexadecimal Database	1484	D
3.1.1.5.26 Aircraft Hexadecimal Database	1485	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1486	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1487	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1488	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1489	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1490	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.5.27 Automatic Flight Plan Tracking Database	1491	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1492	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1493	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1494	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1495	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1496	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1497	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1498	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1499	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1500	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1501	D
3.1.1.5.27 Automatic Flight Plan Tracking Database	1502	D
3.1.1.9.1.1 Traffic Count	1783	D
3.1.1.9.1.1 Traffic Count	1789	D
3.1.1.9.1.1 Traffic Count	1795	D
3.1.1.9.1.1 Traffic Count	1797	D
3.1.1.9.1.1 Traffic Count	1798	D
3.1.1.9.1.1 Traffic Count	1799	D
3.1.1.9.1.1 Traffic Count	1800	D
3.1.1.9.1.1 Traffic Count	1801	D
3.1.1.9.1.1 Traffic Count	1802	D
3.1.1.9.1.1 Traffic Count	1803	D
3.1.1.9.1.1 Traffic Count	1804	D
3.1.1.9.1.1 Traffic Count	1805	D
3.1.1.9.1.1 Traffic Count	1806	D
3.1.1.9.1.1 Traffic Count	1807	D
3.1.1.9.1.1 Traffic Count	1808	D
3.1.1.9.1.1 Traffic Count	1885	D
3.1.1.9.1.1 Traffic Count	1886	D
3.1.1.9.1.1 Traffic Count	1887	D
3.1.1.9.1.1 Traffic Count	1888	D
3.1.1.9.1.1 Traffic Count	1889	D
3.1.1.9.1.1 Traffic Count	1890	D
3.1.1.9.1.1 Traffic Count	1891	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.9.1.1 Traffic Count	1892	D
3.1.1.9.1.1 Traffic Count	1893	D
3.1.1.9.1.1 Traffic Count	1894	D
3.1.1.9.1.1 Traffic Count	1895	D
3.1.1.9.1.1 Traffic Count	1896	D
3.1.1.9.1.1 Traffic Count	1897	D
3.1.1.9.1.1 Traffic Count	1898	D
3.1.1.9.1.1 Traffic Count	1899	D
3.1.1.9.1.1 Traffic Count	1900	D
3.1.1.9.1.1 Traffic Count	1901	D
3.1.1.9.1.1 Traffic Count	1902	D
3.1.1.9.1.1 Traffic Count	1903	D
3.1.1.9.1.1 Traffic Count	1904	D
3.1.1.9.1.1 Traffic Count	1905	D
3.1.1.9.1.1 Traffic Count	1906	D
3.1.1.9.1.1 Traffic Count	1907	D
3.1.1.9.1.1 Traffic Count	1908	D
3.1.1.9.1.1 Traffic Count	1909	D
3.1.1.9.1.1 Traffic Count	1910	D
3.1.1.9.1.1 Traffic Count	1911	D
3.1.1.9.1.1 Traffic Count	1912	D
3.1.1.9.1.1 Traffic Count	1913	D
3.1.1.9.1.1 Traffic Count	1914	D
3.1.1.9.1.1 Traffic Count	1915	D
3.1.1.9.1.1 Traffic Count	1916	D
3.1.1.9.1.1 Traffic Count	1917	D
3.1.1.9.1.1 Traffic Count	1918	D
3.1.1.9.1.1 Traffic Count	1919	D
3.1.1.9.1.1 Traffic Count	1920	D
3.1.1.9.1.1 Traffic Count	1921	D
3.1.1.9.1.1 Traffic Count	1922	D
3.1.1.9.1.1 Traffic Count	1923	D
3.1.1.9.1.1 Traffic Count	1924	D
3.1.1.9.1.1 Traffic Count	1925	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.9.1.1 Traffic Count	1926	D
3.1.1.9.1.1 Traffic Count	1927	D
3.1.1.9.1.1 Traffic Count	1928	D
3.1.1.9.1.1 Traffic Count	1929	D
3.1.1.9.1.1 Traffic Count	1930	D
3.1.1.9.1.1 Traffic Count	1931	D
3.1.1.9.1.1 Traffic Count	1932	D
3.1.1.9.1.1 Traffic Count	1933	D
3.1.1.9.1.1 Traffic Count	1934	D
3.1.1.9.1.1 Traffic Count	1935	D
3.1.1.9.1.1 Traffic Count	1936	D
3.1.1.9.1.1 Traffic Count	1937	D
3.1.1.9.1.1 Traffic Count	1938	D
3.1.1.9.1.1 Traffic Count	1939	D
3.1.1.9.1.1 Traffic Count	1940	D
3.1.1.9.1.1 Traffic Count	1941	D
3.1.1.9.1.1 Traffic Count	1942	D
3.1.1.9.1.1 Traffic Count	1943	D
3.1.1.9.1.1 Traffic Count	1944	D
3.1.1.9.1.3 Operational Performance Metrics	2030	D
3.1.1.9.1.3 Operational Performance Metrics	2031	D
3.1.1.9.1.3 Operational Performance Metrics	2032	D
3.1.1.9.1.3 Operational Performance Metrics	2033	D
3.1.1.9.1.3 Operational Performance Metrics	2034	D
3.1.1.9.1.3 Operational Performance Metrics	2035	D
3.1.1.9.1.3 Operational Performance Metrics	2036	D
3.1.1.14 Alternate Access	2158	D
3.1.1.14.1 Web Portal	2161	D
3.1.1.14.1 Web Portal	2162	D
3.1.1.14.1 Web Portal	2163	D
3.1.1.14.1 Web Portal	2164	D
3.1.1.14.1 Web Portal	2165	D
3.1.1.14.1 Web Portal	2166	D
3.1.1.14.1 Web Portal	2167	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.14.1 Web Portal	2168	D
3.1.1.14.1 Web Portal	2169	D
3.1.1.14.1 Web Portal	2170	D
3.1.1.14.1 Web Portal	2171	D
3.1.1.14.1 Web Portal	2172	D
3.1.1.14.1 Web Portal	2173	D
3.1.1.14.1 Web Portal	2174	D
3.1.1.14.1 Web Portal	2175	D
3.1.1.14.1 Web Portal	2176	D
3.1.1.14.1 Web Portal	2177	D
3.1.1.14.1 Web Portal	2178	D
3.1.1.14.1 Web Portal	2179	D
3.1.1.14.1 Web Portal	2180	D
3.1.1.14.1 Web Portal	2181	D
3.1.1.14.1 Web Portal	2182	D
3.1.1.14.1 Web Portal	2183	D
3.1.1.14.1 Web Portal	2184	D
3.1.1.14.1 Web Portal	2185	D
3.1.1.14.1 Web Portal	2186	D
3.1.1.14.1 Web Portal	2187	D
3.1.1.14.1 Web Portal	2188	D
3.1.1.14.1 Web Portal	2189	D
3.1.1.14.1 Web Portal	2190	D
3.1.1.14.1 Web Portal	2191	D
3.1.1.14.1 Web Portal	2192	D
3.1.1.14.1 Web Portal	2193	D
3.1.1.14.1 Web Portal	2194	D
3.1.1.14.1 Web Portal	2195	D
3.1.1.14.1 Web Portal	2196	D
3.1.1.14.1 Web Portal	2989	D
3.1.1.14.1 Web Portal	2990	D
3.1.1.14.1 Web Portal	2991	D
3.1.1.14.1 Web Portal	2992	D
3.1.1.14.1 Web Portal	2993	D

Specification Paragraph	Req. Number	Verification Method
3.1.1.14.1 Web Portal	2994	D
3.1.1.14.1 Web Portal	2995	D
3.1.1.14.1 Web Portal	2996	D
3.1.1.14.1 Web Portal	2997	D
3.1.1.14.3 User Remote Pilot Terminal	2205	D
3.1.1.14.3 User Remote Pilot Terminal	2206	D
3.1.1.14.3 User Remote Pilot Terminal	2207	D
3.1.1.14.3 User Remote Pilot Terminal	2208	D
3.1.1.14.3 User Remote Pilot Terminal	2209	D
3.1.1.14.3 User Remote Pilot Terminal	2210	D
3.1.1.14.3 User Remote Pilot Terminal	2211	D
3.1.1.14.3 User Remote Pilot Terminal	2212	D
3.1.1.14.3 User Remote Pilot Terminal	2213	D
3.1.1.14.4 Exportable Activity Reports	2215	D
3.1.1.14.4 Exportable Activity Reports	2216	D
3.1.1.14.4 Exportable Activity Reports	2217	D
3.1.1.14.4 Exportable Activity Reports	2218	D
3.1.1.15 Automated Text to Voice (ATTV) Processing	2224	D
3.1.1.16 Automated Voice to Text (AVTT)Processing	2225	D
3.1.2.1.16 Automated Flight Plan Tracking (AFPT) Server	2244	T
3.1.2.1.20 Remote Maintenance Monitoring (RMM)	2248	T
3.2.4.3.1 Maintenance Workstation	3061	I
3.2.4.3.2 Remote Maintenance Monitoring(RMM)	2410	I
3.2.4.4.2 Remote Maintenance Monitoring (RMM)	2411	I
3.2.4.4.2 Remote Maintenance Monitoring (RMM)	2412	I
3.2.4.4.2 Remote Maintenance Monitoring (RMM)	2413	I
3.2.4.4.2 Remote Maintenance Monitoring (RMM)	2414	I
3.2.4.4.2 Remote Maintenance Monitoring (RMM)	2415	I
3.2.4.4.2 Remote Maintenance Monitoring (RMM)	2416	I
3.3.2.6 Internet Access	2744	I
3.3.2.6 Internet Access	2745	I
3.3.2.6 Internet Access	2746	I
3.3.2.6 Internet Access	2747	I
3.3.2.6 Internet Access	2748	I

Specification Paragraph	Req. Number	Verification Method
3.3.2.6 Internet Access	2749	I
3.3.2.6 Internet Access	2750	I
3.3.2.6 Internet Access	2751	I
3.3.2.6 Internet Access	2752	I
3.3.2.6 Internet Access	2753	I
3.3.4.1.2 Data Entry	2811	D
3.3.4.1.2 Data Entry	2812	D
3.3.4.1.2 Data Entry	2813	D
3.3.4.1.2 Data Entry	2814	D
3.3.4.1.2 Data Entry	2815	D
3.3.4.1.2 Data Entry	2816	D
3.3.4.1.2 Data Entry	2817	D
3.3.4.1.2 Data Entry	2818	D

5 Delivery and Transition

See SOW.

6 Acronyms and Glossary of Terms

This chapter identifies and defines the acronyms, abbreviations, technical and specific Alaska Flight Service operational terminology used in this specification.

6.1 Acronyms & Abbreviations

Table 6 - 1 Identifies the acronyms and abbreviations, with associated definitions used in this specification.

The AFSM specification lists many Weather Products which have not been included in this list. These products are identified in the joint FAA and NWS Advisory Circular (AC) number AC 00-45EF.

Table 6-1 Acronyms, Abbreviations and Meaning

ACRONYM/ABBREVIATION	MEANING
A/N	Alphanumeric
ADAS	AWOS Data Acquisition System
ADP Code	"!" (used for NOTAMs)
ADS-B	Automatic Dependent Surveillance-Broadcast
AFF	Automated Flight Following
AFIS	Automated Flight Information Service
AFPT	Automatic Flight Plan Tracking
AFSM	Alaska Flight Service Modernization
AIRMET	Airmen's Meteorological Information
ALERFA	Alert Phase (ICAO)
ALNOT	Alert Notice
AMOC	Air Marine Operations Center
A_o	Operational Availability
A/FD	Airport/Facility Directory
AFSS	Automated Flight Service Station
AR	Air Refueling Route
ARTCC	Air Route Traffic Control Center
ASOS	Automated Surface Observation System
ATC	Air Traffic Control

ATCSCC	Air Traffic Control System Command Center
ATO	Air Traffic Organization
ATOP	Advanced Technologies and Oceanic Procedures (ATOP)
ATTV	Automated Text to Voice
AWOS	Aviation Weather Observation System
AWSS	Aviation Weather Sensor System
BASOPs	Base Operations (Military)
C&A	Certification and Accreditation
CARF	Central Altitude Reservation Function
CHI	Computer-Human Interface
COM	Communication
CONUS	Continental/Contiguous/Conterminous United States
COTS	Commercial-Off-The-Shelf
CWA	Center Weather Advisory
DCT	Direct
DESTRESFA	Distress Phase (ICAO)
DUAT	Direct User Access Terminal
DVFR	Defense Visual Flight Rules
EPIC	El Paso Intelligence Center
ERAM	En Route Automation Modernization System
ESN	Equipment Serial Number
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
ETF	Engineering Task Force

FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FD	Winds and Tempeture Aloft Forecast
FDC	Flight Data Center
FDP 2000	Flight Data Processor 2000
FS21	Flight Service for the 21st Century
FSS	Flight Service Station
GA	General Aviation
GFE	Government Furnished Equipment
GFI	Government Furnished Information
GOES	Global Orbiting Environmental Satellites
GPS	Global Positioning System
GUI	Graphical User Interface
HCS	ARTCC HOST Computer Systems See also ERAM
HFDS	Human Factors Design Standard
ICAO	International Civil Aviation Organization
ICD	Interface Control Document
IFR	Instrument Flight Rules
INCERFA	Uncertainty Phase (ICAO)
INREQ	Information Request
IR	IFR Route (Military Training)
IRD	Interface Requirements Document
ISS	Information System Security
ITT	IFR Transmit Time

JAWS	Juneau Airport Wind System
LAN	Local Area Network
LE	Law Enforcement
LOCID	Location Identifier
LRU	Line Replaceable Unit
M&C	Monitor and Control
MBO	Military Base Operations
MEARTS	Micro En Route Automated Radar Tracking System
METAR	Meteorological Aviation Routine Weather Report
MFP	Master Flight Plan
MOA	Military Operations Area
MTBF	Mean-Time-Between-Failures
MTR	Military Training Route
N/A	Not Applicable
NADIN	National Airspace Data Interchange Network
NAIMES	NAS Aeronautical Information Management Enterprise System
NAS	National Airspace System
NAV	Navigation
NAVAID	Navigational Aid
NEXRAD	Next Generation Weather Radar
NOAA	National Oceanic and Atmospheric Administration
NORAD	North American Aerospace Defense Command
NOTAM	Notice to Airmen
NWS	National Weather Service

O	Other
OASIS	Operational and Supportability Implementation System
OBST	Obstruction
ODS	Operational Data Store
PAEW	Personnel and Equipment Working
PDA	Personal Digital Assistant
PIREP	Pilot Weather Report
POES	Polar Orbiting Environmental Satellite
QALQ	Query – Has aircraft landed at your location?
QICP	Qualified Internet Communication Provider
RAIM	Receiver Autonomous Integrity Monitoring
RFC	Request For Comments
RNAV	Area Navigation
RWY	Runway
SAMS	Special Use Airspace Management System
SAR	Search and Rescue
SD	Radar Weather Report
SIGMET	Significant Meteorological Information
SOW	Statement Of Work
SPECI	Special METAR
SR	Slow Route (Military Training)
SRMGSA	Safety Risk Management Guidance for System Acquisitions

SUA	Special Use Airspace
SVC	Service
SVCA	Service A
SVCB	Service B
SVFR	Special Visual Flight Rules
TAF	Aerodrome Forecast
TEC	Tower En Route Control
TFR	Temporary Flight Restrictions
TIBS	Telephone Information Briefing Service
TMOA	Temporary Military Operations Area
TWEB	Transcribed Weather Broadcasts
TWY	Taxiway
U	Unverified
UA	Routine PIREP
UCWA	Urgent CWA
USNS	United States NOTAM System
UUA	Urgent PIREP
VAD	Velocity Azimuth Display
VFR	Visual Flight Rules
VR	VFR Route (Military Training)
WA	AIRMET
WH	Hurricane Advisory
WMO	World Meteorological Organization
WMSCR	Weather Message Switching Center Replacement
WS	SIGMET
WST	Convective SIGMET
WW	Severe Weather Forecast

ZAN   Anchorage Air Route Traffic Control
                                           Center

6.2 Glossary of Terms and Definitions

Table 6 - 2 Glossary of Terms and Definitions provides definitions for FAA and Alaska Flight Service unique, technical, and operational terminology associated with this specification. General terminology associated with FAA procurements is available at the following link: www.faa.gov.

Some terminology associated with FAA systems may differ depending on the application. In cases where the definition of a specific term conflicts with the definition in this specification, the definition in this document supersedes any other source.

Table 6-2 Glossary of Terms and Definitions

TERM	DEFINITION
Industry Standard	Generally accepted requirements followed by the members of an industry.
Active Flight Workspace	User work area that allows user to create and modify digital flight progress strips.
Advisory	Advice and information provided to assist pilots in the safe conduct of flight and air movement.
AFIS Code	Single alphabetic character that represents the current version of the AFIS broadcast.
Airport Advisory Display	Graphical depiction of information pertinent to a specific airport. Includes airport diagram, traffic and weather information to assist in evaluating airport status.
Aircraft Hexadecimal Database	Contains discrete hexadecimal codes assigned to specific aircraft for ADS-B equipment.
Aircraft Movement Messages	SVCB Messages specific to flight plans.
Analysis	A method of verification that consists of comparing hardware or software design with known scientific and technical principles, procedures, and practices to estimate the capability of the proposed design to meet the mission and system requirements.

TERM	DEFINITION
Area Navigation (RNAV)	Area Navigation (RNAV) provides enhanced navigational capability to the pilot. RNAV equipment can compute the airplane position, actual track and ground speed and then provide meaningful information relative to a route of flight selected by the pilot. Present day RNAV includes INS, LORAN, VOR/DME, and GPS systems. Modern multi-sensor systems can integrate one or more of the above systems to provide a more accurate and reliable navigation system.
Automated Flight Following	Aircraft tracking data based on satellite phone technology. Data is used as a feed for AFPT.
Automated Text To Voice	Process of automatically converting textual weather conditions to a voice recording for use by the aviation community.
Automatic Flight Plan Tracking	AFF and/or ADS-B data feeds are used to provide aircraft location information. Alerts are generated when aircraft has stopped forward movement or data is no longer being received.
Beacon Code	A 4-character transponder or squawk code assigned to an aircraft for DVFR flight plans.
Blank Map	Earth locatable maps used to display static and dynamic overlay information. Map detail may range from land and water only in solid colors to shaded topographical features to photographic imagery.
Center Weather Advisory	Includes CWAs and UCWAs.
Civil Twilight	Defined to begin in the morning, and to end in the evening when the center of the Sun is geometrically 6 degrees below the horizon.
Commercial Off-The-Shelf (COTS)	A product or components of a product (i.e., a LAN card or hard drive) that is available through purchase or lease to the general public in the commercial market at prices based on established catalog or market prices, and is sold in substantial quantities.
Control Messages	SVCB informational messages such as SUAs, ATCSCCs and LEs.

TERM	DEFINITION
Delta Weather Briefing	A weather briefing that identifies and displays current changes in weather conditions between one time period and another.
Demonstration	A method of verification where qualitative determination of properties is made for a configuration item, including software and/or technical data and documentation. The items being verified are observed, but not quantitatively measured, in a dynamic state.
Digital Flight Progress Strips	Representation of flight plans and aircraft contacts with subset of fields. Maintained in electronic strip bay and manipulated in the same way as paper flight progress strips.
Digital NOTAM	NEXGEN NOTAMs that will be created at the source and encoded digitally.
Dynamic Overlays	Information displayed on an earth locatable map, such as a base map or graphic weather product, that automatically updates as new information is received. Examples include weather and NOTAM data.
Electronic Strip Bay	Configurable display containing digital flight progress strips.
End User	Any NAS subsystems that communicate via NADIN.
Equipment Serial Number	Aircraft equipment unique serial number used by AFF.
FAA Weather Cameras	Web cameras used to provide pictures of current weather conditions for a selected location.
Filtering	Blocking and/or allowing access to data that meets a given criteria.
Flight Related Updates	Provides changes in adverse weather and aeronautical conditions for filed flight plans. If aircraft is data-link capable, data will be transmitted to aircraft.
Forecast Model	Computer weather analysis and prediction tools used by NWS personnel when writing forecasts.
Handwriting Input Device	Allows creation of digital flight progress strips using handwritten characters. Also performs some flight planning functions.

TERM	DEFINITION
Hot spare	A spare workstation that is connected to the network and receives the same updates as a normal workstation.
Inactive Flight Plan List	Flight plans that have been closed, cancelled or have timed-out.
Inspection	A method of verification used to determine compliance without the use of special laboratory appliances, procedures, or services, and consists of a nondestructive static-state examination of the hardware, software, and/or the technical data and documentation.
Local Graphic	Graphic created locally at an AFSS/FSS.
Local Knowledge	Textual information about geographic locations. May be stored in the form of static data and overlaid on an earth locatable map.
Master Contact Database	Contains contact information for specific pilots, owners, etc. Data is used in Master Flight Plan entries.
Master Flight Plan	Static data specific to a particular aircraft and operator. Data is used to automatically populate flight plans fields after matching an Aircraft ID.
NEXRAD	Next Generation Weather Radar is a network of high-resolution Doppler weather radars operated by the NWS.
NOTAM Collapse Presentation	A partial display of NOTAMs consisting of the ADP code, Accountable Facility, NOTAM Number, Affected Facility(s), and the first two lines of the NOTAM text. The user can select the collapsed NOTAM to display the entire text.
Notice To Airmen	A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations.

TERM	DEFINITION
Online	Direct communication between a user and a computer which allows a request to be processed and the results displayed immediately on the terminal screen.
Operational Functions	Groups of specific functional privileges that, combined, allow the user to perform System Services.
Orient	To determine the position of in relation to other given points.
Override	To take precedence over, preempt or supersede.
Pilot	AFSM users that access the system either via the web portal or a remote pilot terminal.
Pilot Reports	Includes PIREPs (UA) and Urgent PIREPs (UUA).
Real Time	A process in which information is received and immediately responded to without any time delay.
Remote User Access Terminal	A remote stand alone computer which provides flight service functionality to Flight Service Specialists or others in the aviation community.
Segment	Divide into sections.
Selected Product Retrieval	The user performs a selected product retrieval to request individual briefing product(s) for a specific location(s) for display.
Specialist	A Flight Service Specialist working at an AFSS or FSS. Specialists provide pilots with pre-flight and inflight weather information, suggested routes and other aeronautical information important to the safety of a flight.
Static data	Data in the AFSM database that changes during a 56-day update or manual database correction.
Static database 56-day update	Aviation information that is updated on a 56-day charting cycle.

TERM	DEFINITION
Static Overlay	Aviation information displayed on an earth locatable map, such as a base map or graphic weather product, that is based on static data such as airports, airways, NAVAIDs, airspace boundaries, etc.
Sunrise and Sunset	Time when the upper edge of the disk of the sun is on the horizon.
Surface Area Control Status	Indication on the Airport Advisory Display for control of the Class E airspace (ARTCC or local facility).
Surface Observations	Includes METARs (SA) and SPECIs (SP).
SVCA	General term describing messages and products routed through WMSCR (A/N weather messages and products).
SVCB	General term for A/N messages routed through NADIN. Includes aircraft movement and control messages, SAR messages, administrative messages such as GENOTs, and general message types.
System Capabilities	Core capabilities necessary to provide System Services. System Capabilities include Weather Data, Flight Plan Data, NOTAM Data Transmit, Weather Observation Transmit, and access to the Global AFSM Database.
System Facility States	The status of any individual facility. Includes Operational, Partial, Extended, Failed, Closed, Maintenance and Training States.
System Modes	The status of the AFSM Automation System as a whole. Includes Fully Operational, Degraded and Catastrophic Modes.
System Services	Basic services provided by the System including Preflight Briefings, Inflight Briefings, Flight Plan Data processing, Search and Rescue, NOTAM Transmit and Weather Observation Transmit
Test	A method of verification wherein performance is measured during, or after the controlled application of functional and/or environmental stimuli. Quantitative measurements are analyzed to determine the degree of compliance.
Thumbnail	Term used to describe a miniature version of a slide or picture.

TERM	DEFINITION
User	Flight Service Specialists and Supervisors, Flight Service System Administrators, First Level and Second Level Engineering Maintenance, the System Operations Center and pilots (via the web portal and remote pilot terminals) are all considered users of the AFSM Automation System.
User remote pilot terminal	A fixed remote stand alone computer which provides flight service functionality to the aviation community.
User selectable	Options presented to the user.
Web Portal	A web site service that provides flight service functionality to Flight Service Specialists or others in the aviation community.

7 Appendix A - Telecommunications

Telecommunications information is included in Attachment J-2, Telecommunications.

8 Appendix B - Performance Requirements

This paragraph identifies the performance requirements of the AFSM facilities, the definition of the measurements, and a definition of the loading conditions that apply to each performance requirement and measurement. The unique conditions in Alaska result in different telecommunications performance parameters as compared with CONUS. The telecommunications performance parameters may vary by site depending on the available telecommunications asset. As a result, the operational performance requirements defined in the tables may also vary.

The following information is being provided as a reference from the OASIS B-Specification.

8.1 Product Acquisition Performance Requirements

The following table identifies the weather products ingested into an AFSM facility.

Table 8-1 Product Acquisition Performance Requirements

PRODUCTS	ACQUISITION RATES	PRODUCT RATE AND FREQUENCY AT AFSS AND FSS SITE
Satellite products	Satellite image data is acquired at the rate and frequency they are made available from the satellite.	1 product update every 15 minutes
Gridded products	Products are acquired at the rate and frequency they are made available from the source.	Gridded data updated every 12 hours
Graphic products	Products are acquired at the rate and frequency they are made available from the source.	Product updates every 3 hours to 12 hours based on individual product.
A/N weather products	Products are acquired at the rate and frequency they are made available from the source.	Product update as defined in source ICD.

The System will disseminate the products received from the source to all AFSM AFSSs within 30 seconds average from the receipt of the last byte of data.

8.2 Functional Performance Requirements

Functional performance requirements are defined for the various processing that occurs at the AFSS/FSS site. Loading is based on a site with no more than 38 workstations, A/N weather data being received and processed, and weather graphic data being received and products generated. Site Operational loading was derived from the M1FC specification based on the following table:

Table 8-2 AFSS Site Peak Loading

ITEM	AVERAGE NUMBER PER PEAK HOUR
Route Oriented Briefing	205
Local Briefing	107
Flight Plans	150
Aircraft Contacts	94
Miscellaneous	1190

Column 1 of Table 8 - 2 identifies the items or types of transactions the AFSM Automation System is expected to process. Column 2 represents the average number of transactions to be processed by the System for the Peak Hour by the Peak AFSS. During peak operations, certain types of transactions identified in Table 8 - 2 may be imposed on the system concurrently. These concurrent transactions imposed on the system may be either manually input by the specialist or prescheduled by the specialist to occur at the same time. In either case, the System will be capable of receiving up to 58 concurrent transactions. Due to receipt of these types of concurrent transactions, the System will be capable of scheduling concurrently up to 174 messages for transmission.

For transmission, concurrent transactions are defined as the number of messages with the same scheduled transmit time. For reception, concurrent transactions are defined as the number of simultaneous incoming messages. As a minimum, these concurrent transactions should be completed two minutes prior to the scheduled retransmit time.

Some of the transactions in column 1 of Table 8 - 2, when processed by the System, will cause the system to generate external messages to remote system interfaces. As stated above, the System will be capable of scheduling concurrently up to 174 messages for transmission. Table 8 - 3 further defines the mix of concurrent transactions and their schedule for transmission.

58 Transactions Concurrently   174 Scheduled Msgs for Transmission

USERS -------------------------------------→ AFSM Automation System

Table 8-3 AFSS Site Peak Concurrent Transaction Rate

# OF CONCURRENT TRANSACTION TYPE	# OF EXTERNAL MESSAGES SCHEDULE FOR TRANSMISSION
10 Prestored Flight Plans to a single destination address, one closure point address, along with a copy to AMOC	30
Greater than or equal to 40 Flight Plans concurrently scheduled in the system using the IFR or FSS Transmit times to a single destination address, with a copy to AMOC and a copy to one Closure Point Address	Greater than or equal to 120
Greater than or equal to 8 General Facility messages of 15 lines (Miscellaneous) to a single destination address, one closure point address, along with a copy to AMOC	Greater than or equal to 24

Table 8 - 4 defines specific functions and their performance requirements.

Table 8-4 Operational Performance Parameters

	REQUIREMENT DESCRIPTION	CONDITION(S) (PRODUCT SIZES MAY EXCEED SPECIFIED VALUES)	MEAN	95% TILE	99.99% TILE
a	Receive, Process and Store Products in the Data Base	From receipt of last byte of data to completion of product storage in the data base			
1	Single Non-breakdown A/N Weather Product	500 byte product	1	1.8	2.5
2	Breakdown Collective A/N Weather Product	50 breakdown items, average size 120 bytes, all individual items stored in data base	2	3.7	5.0
3	NOTAM Collective Breakdown Product	50 breakdown items, average size 200 bytes each, all items stored in data base	2.5	4.6	6.2
4	COR, AMD, or Duplicate Product	200 byte product, replace existing product in the dynamic data base	1	1.8	2.5
5	Graphic Product	All non-imagery graphic products	3	5.6	7.5
6	Individual Radar Product		3	5.6	7.5
7	National Radar Mosaic Product		7	10.5	14
8	GOES Satellite Imagery		3.5	5.2	7.5

	REQUIREMENT DESCRIPTION	CONDITION(S) (PRODUCT SIZES MAY EXCEED SPECIFIED VALUES)	MEAN	95% TILE	99.99% TILE
9	Polar Orbit Satellite Imagery		3.5	5.2	7.5
b	A/N Weather and NOTAM Product Display	From data request enter on the user workstation to beginning of product display			
1	Weather Product	Single 500 byte product	2	3.7	5.0
2	NOTAM Product	Single 500 byte product	2	3.7	5.0
3	Standard Route Weather Briefing	500nm route, 2 legs, 100nm route corridor width, 400nm winds aloft corridor width, all required briefing items	2.5	4.6	6.2
4	Standard Area Weather Briefing Products	Area radius 300nm, low altitude, all required briefing items	2.5	3.7	5.0
5	Outlook Route Weather Briefing Products	500nm route, 2 legs, route corridor width 100nm, all required briefing items, except no current data	2.5	4.6	6.2
6	Outlook Area Weather Briefing Products	Area radius 300nm, low altitude, all required briefing items	2.5	4.6	6.2
7	Product Weather Briefing (By LOCID)	10 LOCIDs, 3 product types	2	3.7	5.0
8	Product Weather Briefing (By State)	1 state, 1 product type, minimum of 50 products	2	3.7	5.0
9	Product Weather Briefing (Route)	500nm route, 2 legs, route corridor width 100nm, 2 product types	2.5	4.6	6.2
10	Product Weather Briefing (Area)	Area radius 300nm, 2 product types	2.5	4.6	6.2
11	Product Directory	Single product type	1	1.8	2.5
c	Graphic and Imagery Product Display	From data request enter on the user workstation to beginning of display			
1	Graphic Weather Product	All non-imagery graphic products, includes map background	2	3.7	5.0
2	Graphic Weather Product	All non-imagery graphic products, includes map background and route/area overlay.	2	3.7	5.0
3	Automatically Generated Products	All non-imagery graphic products, includes map background and route/area overlay.	2	3.7	5.0
4	Radar Product (Single Station)	Includes map background and route/area overlay	2	3.7	5.0
5	National Radar Mosaic	Includes background map and route/area overlay	2	3.7	5.0
6	Satellite Imagery	Includes background map and route/area overlay	2	3.7	5.0
7	Graphic Sequence	4 product single station radar sequence with map background	2	3.7	5.0
d	Flight Data Retrieval and Display	From data request enter on the user workstation to beginning of display			

	REQUIREMENT DESCRIPTION	CONDITION(S) (PRODUCT SIZES MAY EXCEED SPECIFIED VALUES)	MEAN	95% TILE	99.99% TILE
1	Pre-stored Flight Plan	Single pre-stored flight plan	1.5	3.0	4.0
2	Preferred Route	Single preferred route	1.5	3.0	4.0
3	Flight Plan	Single flight plan by aircraft ID	2	3.7	5.0
4	Flight Data Lists	Single aircraft ID from Proposed, Inbound, In-flight Contacts, Suspense and Law Enforcement Lists	1	1.8	2.5
5	Flight Data List	In-flight contacts	1	1.8	2.5
6	ATCSCC Traffic Messages	Any text message of at least 500 bytes	2	3.7	5.0
7	Static flight data	Any static flight data set	3	5.6	7.5
8	WINGS Logon	From Username/Password OK to Functional User Selection	5	9.3	12.5
e	Convert Flight Plan Data	From data request enter on the user workstation to completion of conversion			
1	Convert Domestic Flight Plan to ICAO Format	Single domestic flight plan	1	1.8	2.5
2	Convert ICAO Flight Plan to Domestic Format	Single ICAO flight plan	1	1.8	2.5
f	Flight Information Updates	From receipt of last byte of update information to completion of DB update.			
1	Automatically update flight plan information	ETD change, information received from internal or external source	2	3.7	5.0
2	Automatically update a multiple in-flight work list queue	Information received from internal or external source	2	3.7	5.0
g	Encode-Decode	From data request enter on the user workstation to response display			
1	Encode Request	Single location name entry	2	3.7	5.0
2	Decode Request	Single location identifier entry	2	3.7	5.0
h	Wild Card Search	From data request enter on the user workstation to response display			
1	Encode Request	Single wild card location name (actual first three letters of name provided, state identification not included	3	5.6	7.5
2	Decode Request	Single wild card location identifier (2nd or 3rd character wild)	3	5.6	7.5
3	History File Transaction Search (last 24 hours)	Single wild card pilot name (first four letters of pilot name)	N/A	N/A	15 min
i	Message Dissemination Within AFSS/FSS Site	From transmit enter on the user workstation or equivalent to last byte received at appropriate function/position(s)			
1	All types of messages	500 bytes, includes flight, weather, alert, and administrative messages	3	5.6	7.5
j	Message Receipt from External Sources	From receipt of last byte of data to update of Proposed, Inbound and Suspense lists. For non-flight plan message updates of alert queue.			

	REQUIREMENT DESCRIPTION	CONDITION(S) (PRODUCT SIZES MAY EXCEED SPECIFIED VALUES)	MEAN	95% TILE	99.99% TILE
1	Non-Flight Plan Messages	500 byte message	1	1.8	2.5
2	Flight Plan Messages from Other AFSM Facilities	500 byte message	1	1.8	2.5
3	Flight Plan Messages from non-AFSM Facilities	250 byte message (including flight plan validation)	1	1.8	2.5
k	Message Dissemination to External Sources, except Remote Workstations	From transmit enter on the user workstation or equivalent to last byte received (equivalent means automated initiation of action)			
1	Non-flight Plan Messages	500 byte message	.5	.9	1.2
2	Flight Plan Message	250 byte message (including flight plan validation and automatic addressing)	.5	.9	1.2
l	Message Receipt at Remote Workstation	From receipt of last byte to delivery of first byte at appropriate workstation function/position			
1	All Data Received from AFSM Facility	500 byte message	N/A	N/A	N/A
m	Message Dissemination from Remote Workstation	From transmit enter on the Remote Workstation or equivalent to first byte received at Remote Workstation			
1	Non-flight Plan Message	500 byte message	.2	.4	.5
2	Flight Plan Message	250 byte message	.2	.4	.5
n	Alert Notification Processing	Receipt of last byte of alert message or event parameter met until alert at designated function/position(s)			
1	All Alert Notifications	Alert displayed at designated position(s)	2.5	4.6	6.2
o	Flight Data Request	Receipt of request message from user workstation to completion of response message/event report			
1	SAR Request	A single aircraft ID, for last 24 hours, transmit response	N/A	N/A	N/A
2	Event Reconstruction Request	A single aircraft ID for last 15 days, assemble hardcopy listing	N/A	N/A	30 min
p	Products Display	From data request enter on the user workstation to beginning of display			
1	Surface Analysis Plot	Plot	2	3.7	5.0
2	Weather Depiction Plot	Plot	2	3.7	5.0
3	Radar Plot	Plot	2	3.7	5.0
4	Pilot Report Plot	AFSM area of responsibility, at least 30 PIREPs	2	3.7	5.0
5	Severe Weather Forecast Alert Plot	Individual product overlay on map	2	3.7	5.0
6	SIGMET Plot	Individual product overlay on map	2	3.7	5.0
7	Convective SIGMET Plot	Individual product overlay on map	2	3.7	5.0
8	AIRMET Plot	Individual product overlay on map	2	3.7	5.0

	REQUIREMENT DESCRIPTION	CONDITION(S) (PRODUCT SIZES MAY EXCEED SPECIFIED VALUES)	MEAN	95% TILE	99.99% TILE
9	Center Weather Advisory Plot	Individual product overlay on map	2	3.7	5.0
10	Special Use Airspace (SUA) Plot	Individual product overlay on map	2	3.7	5.0
q	Requested Product	From data request entry on the user workstation to beginning of product display			
1	Trend Weather Product	Single weather location	2	3.7	5.0
2	Flight Profile Product	500nm route, 2 legs, corridor width 100nm, low altitude	10	17	27
r	Manually Generated Product	From transmit enter on the user workstation to receipt of first byte			
1	Surface Weather Observation	Single observation	.5	.9	1.2
2	PIREP	Single report	.5	.9	1.2
3	NOTAM	Single NOTAM	.5	.9	1.2
4	Data Request (Request-Reply)	Single specialist requests (excludes database restoration requests)	.5	.9	1.2
5	Data Request (Request-Reply)	Supervisory database restoration request	.5	.9	1.2
s	Adjust Viewing Window (Product on Screen)	From scroll or zoom/pan request enter on the AFSSWS to beginning of action			
1	Scroll	Text product	N/A	N/A	N/A
2	Zoom	Graphic and image product	N/A	N/A	N/A
3	Pan	Continuous to limits of graphic	N/A	N/A	N/A
t	Multi-product Overlays	From request enter on the user workstation to beginning of display of composite product			
1	Area radar display and GOES visual imagery	With map background	3	5.6	7.5
2	Area radar display and GOES visual imagery	With map background and selected flight route	3	5.6	7.5
3	SUA and Weather Depiction Plot	With map background and selected flight route	3	5.6	7.5